REPORT RESUMES

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AN ANALYSIS AND SURVEY OF THE NATURE, EXTENT AND SCOPE OF DIAGRAMMING IN THE AMERICAN PUBLIC SCHOOL SYSTEM.

BY- WYMAN, EMMELINE BURROUGHS
SOUTH CAROLINA UNIV., COLUMBIA

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THE PURPOSE OF THIS STUDY WAS TO ASSESS THE USE OF DIAGRAMING AS A TEACHING DEVICE IN PUBLIC SCHOOLS. QUESTIONNAIRES WERE SENT TO THE STATE ENGLISH CURRICULUM DIRECTORS OR THE STATE SUPERINTENDENTS OF EDUCATION IN ALL 50 STATES, AND THE CITY SUPERVISORS OF ENGLISH IN THE 15 LARGEST AMERICAN CITIES. IN ADDITION, PERSONAL CORRESPONDENCE WAS CARRIED OUT WITH EDUCATIONAL ADMINISTRATORS AND TEACHERS. RESPONSES TO THE QUESTIONNAIRES WERE RECEIVED FROM 94 PERCENT OF THE STATES AND 67 PERCENT OF THE CITIES. RESULTS INDICATED THAT THE REED AND KELLOGG DIAGRAM WAS USED BY A MAJORITY OF THE STATES (MOST COMMONLY ON THE JUNIOR HGIH SCHOOL LEVEL) AND BY A MINORITY OF THE CITIES (ON BOTH THE ELEMENTARY AND SECONDARY LEVELS). LINGUISTIC DIAGRAMS WERE SELDOM USED, THOUGH INTEREST IN THEM WAS INCREASING. NO INSTANCE OF THE USE OF THE BALLOON OR SLOT-AND-FILLER DIAGRAMS WAS FOUND. THREE-QUARTERS OF THE RESPONDING STATE DEPARTMENTS AND NEARLY ALL OF THE CITIES HAD NO MATERIAL AVAILABLE FOR TEACHERS ON DIAGRAMING, AND TWO-THIRDS OF THE RESPONDING CITY SUPERVISORS DESIRED THAT MATERIALS ON DIAGRAMS BE PROVIDED THROUGH A CENTRAL AGENT. ALTHOUGH RELEVANT RESEARCH ON DIAGRAMS INDICATES THAT THEY ARE NOT EFFECTIVE TEACHING DEVICES FOR IMPROVING COMMUNICATION SKILLS, MANY WRITERS ON ENGLISH EDUCATION ADVOCATE THEIR USE FOR THIS PURPOSE OR FOR GRAMMATICAL ANALYSIS. (THIS REPORT WAS SUBMITTED AS A MASTER OF ARTS THESIS IN THE SCHOOL OF EDUCATION, UNIVERSITY OF SOUTH CAROLINA.) (AUTHOR/DL)

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AN ANALYSIS AND SURVEY OF THE NATURE, EXTENT AND SCOPE OF DIAGRAMMING IN THE AMERICAN PUBLIC SCHOOL SYSTEM

by

Emmeline Burroughs Wyman

Bachelor of Arts

University of South Carolina, 1960

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University of South Carolina
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Lawrence E. Giles
School of Education
Director of Thesis

School of Education
2nd Reader

Dean of the Graduate School

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ABSTRACT

The purpose of this study is to determine (1) the present status of diagramming in the public schools throughout the United States; (2) the types of diagrams being used, (3) the merits and shortcomings of each, (4) expert opinions concerning the effectiveness of diagrams as a teaching device, (5) the resources available to teachers for securing information on diagramming, and (6) the extent to which more information is desired and from what source such information is preferred. Three sources were used to secure this information: (1) the literature concerning various types of diagrams, (2) questionnaires sent to all fifty states and the fifteen largest American cities (according to the 1960 census), and (3) personal correspondence with educational administrators and teachers.

Findings from the questionnaires were based on a 94.0% state response and a 66.7% city response. These findings indicated that the Reed and Kellogg diagram was commonly used at the junior high school level by a majority of the responding states. Only a minority of the cities reported using the Reed and Kellogg system--use here was divided equally between the elementary and secondary levels.

Overall, linguistic diagrams were reported as seldom used. When linguistic diagrams were used, responding states and cities reported using them predominately at the secondary level. Many comments, made by respondents, however, indicated that interest in the Reed and Kellogg method was waning, while interest in linguistic methods was increasing.

According to the survey the types of diagrams reported in use were: (1) the Reed and Kellogg, (2) the IC (immediate constituent) tree or a variation, and the transformational (branching) tree. No use of the balloon diagram or earlier forms, nor use of the slot-and-filler diagram was disclosed. The review of the merits and shortcomings of each type of diagram was derived from the literature.

Although a survey of the research on diagramming (also taken from the literature) indicated it was not an effective teaching device for improving communication skills, many writers advocated its use for this purpose. Other writers contended the value of diagramming lay in its use in grammatical analysis rather than in connection with communication skills.

Of the states responding to the questionnaire, three-quarters had no material available for teachers on diagramming. Nearly all of the cities offered no such material. Two-thirds of the responding cities desired that materials on diagrams be provided through a central agent with the majority of the states and cities preferring the National Council of Teachers of English as a source.

ACKNOWLEDGMENTS

The writer gratefully acknowledges the assistance of the many educators and supervisors throughout the United States whose willing cooperation made a study of this nature possible. Special thanks go to Dr. Lawrence E. Giles, major advisor of the thesis, for his wise direction, counsel, and patience. Equal credit is due to Mr. Glenn Martin, second reader of the study, whose excellent advice guided the work at all stages.

Gratitude is likewise owed to Mrs. Gene Bruce for the typing of a somewhat tedious manuscript and to Miss Sarah Wise for duplicating the many forms necessary in the survey.

Special appreciation is given to my husband, Brookie, whose contributions of patience and understanding made this work possible.

Any deficiencies of this study are not the work of the persons recognized above, but the fault of the writer after suggestions and corrections had been made.

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS ii

LIST OF TABLES iv

Chapter

I. NATURE AND PURPOSE OF THE STUDY 1

II. TRADITIONAL ENGLISH GRAMMAR (REED AND KELLOGG DIAGRAMS) 11

III. DESCRIPTIVE ENGLISH GRAMMAR (LINGUISTIC DIAGRAMS) 28

IV. REVIEW OF CURRENT ARTICLES IN PROFESSIONAL JOURNALS 45

V. FINDINGS FROM THE SURVEY 60

VI. SUMMARY AND CONCLUSIONS 82

BIBLIOGRAPHY 88

APPENDIXES 92

I. Correspondence with Dr. J. N. Hook, Dr. H. A. Gleason, Jr., and the National Council of Teachers of English
II. List of English Curriculum Directors and State Superintendents of Education; also Address Used for All City Supervisors of English
III. Explanatory Letters, Reproduction of Questionnaires Sent to States and Cities, Diagram Enclosure, and Follow-up Letter Sent to States and Cities
IV. Lists of Persons Recommended by Respondents to Questionnaire and Letter of Inquiry Sent to Them
V. Responses Received from Letters of Inquiry
VI. Explanatory Letters from States Not Returning Questionnaire
VII. Letters Accompanying Questionnaires from the State of Ohio and the City of New York
VIII. Letter to Delaware Requesting Sample of Balloon Diagrams and Correspondence Concerning Diagrams Endorsed by the Texas Education Agency

LIST OF TABLES

Table | Page
1. Use of Reed and Kellogg Diagrams 62
2. Level of Usage of Reed and Kellogg Diagrams 63
2a. Level of Usage of Reed and Kellogg Diagrams by Percentage 63
3. Use of Linguistic Methods of Diagramming 65
4. Level of Usage of Linguistic Methods of Diagramming 65
4a. Level of Usage of Linguistic Methods of Diagramming by Percentage 66
5. Books on Adopted Textbook List Containing Linguistic Diagrams 67
6. Diagramming Samples Available 72
7. Types of Diagrams Available 73
8. Response Indicating Desire to Have Information on Diagramming Provided by a Central Agent 74

CHAPTER I

NATURE AND PURPOSE OF THE STUDY

Introduction

Diagramming has long been a controversial issue among English teachers.[1] Many teachers of traditional grammar regard it not only as a form of graphic representation for describing the English language but also as an indispensible tool for teaching correct usage in speech as well as in writing. When viewed as a tool, diagramming is considered primarily as a means to an end. Other teachers, also proponents of traditional grammar, question the value of diagramming. While they recognize its value as a visual device in initial explanations of fundamental syntactical relationships, they see little relationship between the diagramming skills of their students and their ability to speak and write well.

Changes from traditional to "linguistic" grammars--structural[2] or transformational--will not resolve the issue, since these newer methods of language analysis also make frequent use of "diagrams" of one sort or another. Teachers who advocate the "new grammar," developed by structural linguists and transformationalists, recognize that newer methods of language analysis also include diagrams. Thus the question as to the merit of diagramming as a teaching device whether a part of traditional, descriptive or transformational grammar remains a moot point.

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[1] Along with the general confusion on the subject, the spelling of the term also varies--some writers spelling the word with two "m's" (diagramming), others using only one (diagraming). The writer prefers the former spelling and will use this throughout this study except where the writer of directly quoted material uses the alternate spelling.

[2] The terms structural and descriptive will be used interchangeably in this study. According to J. N. Hook [Modern American Grammar and Usage (New York: Ronald Press, 1956), p. 47], descriptive or structural grammar is one branch of descriptive or structural linguistics, terms which are still used interchangeably in the literature.

In addition, there are those who would not use diagrams at all. Whether teaching a traditional grammar course or working with linguistics, teachers may or may not decide to use diagrams. While many teachers of the "old school" of traditional grammar make the conventional Reed and Kellogg diagram an integral part of their grammar instruction, other teachers of traditional grammar take a "correct usage" approach using no diagrams and referring to grammatical concepts only as a last resort. Similarly, teachers using the new grammar vary in their use of graphic devices by using formulas or diagrams--or electing to use no diagrams at all. Some teachers, however, seem to take a middle-of-the-road approach. This use of diagramming is most clearly stated by J. N. Hook as follows:

> Very simple diagrams may be used in class to clarify some elements of structure; for instance, an arrow may point from a modifier to the word it modifies, or a brace may enclose the parts of a compound subject or the words that compose a phrase or a clause. But assignments requiring students to diagram are seldom justified and never justified when they necessitate expenditure of much time in determining what kind of line where and what angle. The formulas of the structuralists and the generativists are equivalent to diagrams and are subject to the same abuses. If they are employed only to identify the parts of someone else's sentences, they can be very wasteful of time. But when they are used on occasion to help students construct sentences of their own in accordance with specified patterns, they may throw light on some structures.[3]

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[3] J. N. Hook, The Teaching of High School English, Third Edition

In personal correspondence with the writer, Dr. Hook states, "As my book The Teaching of High School English reveals, I am not very enthusiastic about diagramming. Basically, what it teaches is just how to diagram."[4] Many teachers would agree.

Research in the area of diagramming has produced no conclusive results. As Hook points out, "Although some teachers, and therefore many textbooks, still include instruction in diagramming, there is hardly an iota of evidence that such instruction leads to improved student-written sentences."[5] A study made by Charles E. Whitehead, Jr., is typical. In this study the belief that grammar-diagramming would improve student writing skills led to an investigation involving Reed and Kellogg diagrams. A six week intensive review of grammar-diagramming was designed for experimental groups. The same course without the grammar-diagramming unit was used for control groups. Four teachers and 132 students were included in the investigation. In instructing their classes, the teachers of the experimental groups used the introductory unit of a grammar-diagramming review. The teachers of the control groups used the literature-writing approach to improve student writing skills and only reviewed grammar and sentence structure as the need arose. Pupils of both groups were tested at the beginning of the course to measure initial ability and were again tested at the end of the course to measure final achievement in the improvement of writing skills. The results indicated that there was no statistically significant difference

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(New York: The Ronald Press Company, 1965), pp. 291-92.

[4] Hook letter, Appendix I.

[5] Ibid.

in final achievement in the areas of sentence structure, vocabulary, punctuation or 500-word composition as measured by the Subject A Test of the University of California.[6] The only conclusion that could be reached in this study was that grammar-diagramming is as effective as literature-writing in the improving of student writing skills. But the question might be raised as to whether *either* method really produced the improved writing skills.

Besides the Whitehead thesis, there is currently little research on diagramming being published. The writer knows, for example, of no research at this time which investigates the effectiveness of linguistic diagrams on instruction or compares them to the effectiveness of traditional ones. Most of the research in this area compares some aspect of descriptive or transformational grammar with traditional grammar--but not linguistic diagrams with traditional ones.

Four earlier studies involving traditional diagrams, however, were undertaken in the 40's at the University of Iowa under the direction of Professor Harry A. Greene.[7] Greene points out that diagramming of sentences was widely used as a method of teaching language until well into the 1920's; then for no apparent reason it disappeared. In 1935 there was a resurgence of its use which continued into the 40's. At this time Greenefelt that many teachers were accepting diagramming as a teaching procedure without any supporting evidence as to its merit.[8]

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[6] Charles E. Whitehead, Jr., "The Effect of Grammar-Diagramming on Student Writing Skills" (Ph. D. dissertation, Montana State University, 1965), pp. 1-111.

[7] Harry A. Greene, "Direct Versus Formal Methods in Elementary English," *Elementary English*, XIV (May, 1947), 279.

[8] *Ibid.*, pp. 278-279.

> In view of the rather wide-spread belief in diagraming as an effective method of developing sentence mastery, it would appear to be legitimate to expect to find considerable experimental evidence supporting it in the professional literature. A careful search of all available compilations of investigations in the field of language composition from 1900 to 1941 was made. Lyman's Summary of Investigations published in 1929 reported approximately 250 studies dealing with grammar, language and composition and not one of these studies mentioned diagraming in any way. Later summaries of research by Lyman, Dora V. Smith, J. P. Leonard, and by the writer covering hundreds of additional titles still revealed no study prior to 1940 which definitely considered the diagraming of sentences. The lists of theses and studies from educational institutions throughout the United States under the heading of language and composition in the twelve volumes comprising the Bibliography of Research Studies in Education covering the period from 1928 to 1941 were consulted with the same results. The titles and the notations concerning the findings of specific studies gave no indication that diagraming of sentences had been subjected to experimental attack.[9]

Thus seeing a real need for experimental research, Greene directed the following studies: "The Effects of Sentence Diagraming on English Usage and Reading Comprehension" by Kenneth C. Barghahn; "A Study of the Effects of Sentence Diagraming on English Correctness and Silent Reading Ability" by Walter W. Barnett; "The Effect of Diagraming on Certain Skills in English Composition" by James Reece Steward; and "The Effect of a Knowledge of Certain Grammatical Elements on the Acquisition and Retention of Punctuation Skills" by Clair J. Butterfield. From these theses Greene concludes that:

> The implications of the studies . . . are of practical significance. The three studies dealing with sentence diagraming indicate uniformly that diagraming is a skill which can be developed but has no value in itself. It does not lend itself to correlation with other subjects or projects or the program of the school. There is little point of training the pupil to graphically portray sentences except for the improvement which it brings to his

---

[9] *Ibid.*

> ability to write effectively. The evidence shows that this is slight. There is considerable question, therefore, of the advisability of employing sentence diagraming as a method of developing language mastery. In the light of the data secured by Butterfield, there is reason to expect superior results in the teaching of punctuation by direct methods rather than by methods which are based upon a knowledge of related grammatical elements. Punctuation is a function of meaning rather than a function of grammar. Furthermore, the description of the grammatical elements of a sentence often must be deferred until the punctuation is completed according to the meaning intended.[10]

In the Butterfield study diagramming as a "related grammatical element" is, of course, implied.

A later study in the 50's--made by Anthony L. Tovatt[11]--is particularly forceful in discouraging the use of diagrams, although the methods of investigation as well as the basic assumption of the study tend to make the results non-conclusive. Tovatt reasoned that if diagramming is a skill which is taught to aid in writing sentences, then those who have received such training must utilize this skill in their daily lives. To test his assumption Tovatt had 150 people diagram a sentence, indicate whether they visualized parts of the sentence as they diagrammed, and tell what they believed should be emphasized in a high school English class. Tovatt's results among other things indicated that 96.0 percent of the total group could not even diagram the sentence and 38.0 percent of the total group could not diagram but still believed that when they wrote they visualized sentence elements as in a diagram. On this evidence Tovatt concluded that the value of diagramming is to be questioned seriously, since there is little carryover beyond the classroom to actual writing in later life. Further, because people who were taught diagramming do not realize this, English teachers who teach diagramming to improve writing skills are "perpetuating a fiction for a fact."[12]

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[10] Greene, op. cit., p. 285.

[11] Anthony L. Tovatt, "Diagraming: A Sterile Skill," English Journal, XLI (February, 1952), 91-93.

Are English teachers today actually perpetuating fiction for facts? What are the current attitudes of English teachers and educational leaders toward diagramming? What is actually being taught in the classrooms throughout the United States? In spite of confusion or differences of opinion, diagramming is an integral part of most English programs today. Many teachers, whether traditionally or linguistically inclined, continue to use it. Textbooks, visual materials and syllabi include it. Many students throughout the country work with it. For this reason the writer sees a need for an investigation of the current status of diagramming. In order to determine what is actually taking place, the following information is needed:

1. We need to know (a) what types of diagrams are actually in use in English classrooms throughout the United States, and (b) what experimentations and innovations are taking place.

2. We need to know (a) what the merits and shortcomings of each are in terms of their practical value for classroom instruction, (b) what the possibilities of each are in revealing or describing the English language, and (c) what the possibilities of each are in helping students improve oral and written expression.

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[12] *Ibid.*, p. 93.

3. We need to know (a) what resources are available to teachers in each state for securing information about and materials on diagramming, (b) what specific information is available at the state level, (c) what further information is needed, and (d) from what source this information can be obtained.

Purposes of the Study

Growing out of these needs and related to them are the purposes of this study:

1. To determine the present status of diagramming in the public schools throughout all fifty states of the United States.
2. To discover what types of diagrams are being used.
3. To investigate the merits and shortcoming of the various types of diagrams.
4. To determine how diagrams can be used as an effective teaching device.
5. To reveal the resources available to teachers for securing information on diagramming.
6. To point out the extent to which more information is desired and from what source such information is preferred.

Delimitations of the Study

1. The study is limited to the public secondary schools in the United States.
2. The information obtained is limited to the opinions of state superintendents of education, state English curriculum directors, city supervisors of English, and selected educators and teachers in the field of English education.

3. The information obtained from the city supervisors of English is limited to the fifteen largest cities in the United States according to the 1960 census.

4. In reviewing the merits and shortcomings of diagrams in current use and in determining how diagrams can be utilized most effectively by the classroom teacher, the study is limited to material found in the literature and generally to the opinions of educators and teachers recommended by respondents to a questionnaire.

Design of the Study

The material for this study is derived from three sources: the literature concerning the various types of diagrams, the findings from a questionnaire sent to fifty states and fifteen cities, and personal letters sent to outstanding educators and teachers who are working with traditional and linguistic grammar. The general outline for the study is as follows:

Chapter I--Introductory remarks concerning the present status of diagramming have led to a brief review of current research and the need for and purpose of the study.

Chapter II--A brief review of traditional English grammar will be followed by a more extended discussion of the "balloon" and Reed and Kellogg diagrams.

Chapter III--An explanation of descriptive English grammar and transformational-generative grammar will be followed by an expanded discussion of the IC tree diagram, the slot-and-filler diagram, the Chinese box diagram, and the transformational tree diagram.

Chapter IV--A brief review of the current literature on diagramming will be given with emphasis on the merits and shortcomings of each method. The practical value of each method will be considered when related to actual classroom instruction.

Chapter V--An objective presentation of the findings from the questionnaire will be given.

Chapter VI--Summary, conclusions, and recommendations will be presented.

CHAPTER II

TRADITIONAL ENGLISH GRAMMAR

Traditional grammar has its roots in early Greek and Latin studies which became the basis of much philosophical discussion by medieval scholars.[13] The Scholastics "gave grammar its place in the _trivium_ and studied the Latin language intensively."[14] In the eighteenth century traditional grammar not only continued to be studied but also became increasingly prescriptive and authoritarian as grammarians produced normative grammars in which they often repudiated the actual usage of the times, including that of Swift, Addison, and Pope, in favor of speculative notions.[15] Grammars, such as James Buchanon's _Regular English Syntax_ (1767); Robert Lowth's _A Short Introduction to English Grammar_ (1762); and William Ward's _A Grammar of the English Language_ (1765),[16] came about because of the rise of a wealthy middle class in the eighteenth century and the resultant spread of education--factors which led many dialect-speakers to want to learn the upper class forms of speech.[17, 18]

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[13] Charles Allen Alva, "Descriptive Grammar in the Teaching of English: A Survey of its Extent, Use, and Status in the Public High Schools of California" (Ph. D. dissertation, Stanford University, 1959), p. 17.

[14] Robert Pooley, _Teaching English Grammar_ (New York: Appleton-Century-Crofts, Inc., 1957), p. 8.

[15] Pooley, _op_. _cit_., pp. 17-18.

[16] _Ibid_.

[17] Leonard Bloomfield, _Language_ (New York: Henry Holt and Company, 1933), p. 7.

[18] National Council of Teachers of English, _The English Language_

This prescriptive attitude toward language prevailed in this country supported by the "mental" discipline theory of psychology as well as by teachers of Latin and modern languages.[19] But dissatisfaction with the teaching of formal English grammar began to grow in intensity from the 1850's on.[20] A formal report, embodying both this dissatisfaction and the belief in the mental discipline theory, was made in 1892 by the Committee of Ten:

> With regard to the study of formal grammar the Conference wishes to lay stress on three points: (1) a student may be taught to speak and write good English without receiving any special instruction in formal grammar; (2) the study of formal grammar is valuable as training in thought, but has only an indirect bearing on the art of speaking and writing; and (3) the teaching of formal grammar should be brought into close connection with the pupil's work in reading and composition. These principles explain the considerable reduction recommended by the Conference in the amount of time allowed this study.[21]

In the past fifty years, despite criticisms of traditional grammar and recommendations that "functional" grammar be taught, traditional grammar has remained essentially the same, in its analysis, in its methodology, and in the textbooks.[22, 23] In an article appearing in the English

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Arts in the Secondary School, Prepared by The Commission on the English Curriculum (New York: Appleton-Century-Crofts, Inc., 1956), p. 279.

[19] Charles Fries, American-English Grammar (New York: Appleton-Century Co., 1940), p. 19.

[20] Charlton Laird, The Miracle of Language (Cleveland: World Publishing Co., 1953), p. 30.

[21] National Education Association, Report of the Committee of Ten on Secondary School Studies (New York: American Book Co., 1894), p. 89.

[22] NCTE, The English Language Arts in the Secondary School, op. cit., p. 383.

[23] Pooley, op. cit., pp. 52-53.

Journal, entitled "The Nature of Grammar," Anderson offers a summary of the underlying assumptions that traditional grammars have made about the nature of the English language. These assumptions are:

> (1) that the structure of English is basically akin to the structure of a highly inflected language like Latin;
>
> (2) that the terminology of English grammar should, therefore, be able to borrow most of the vocabulary of Latin, such as "nominative," "genitive," "dative," etc.;
>
> (3) that the "rules of sentence structure for English" ought to parallel the rules for Latin syntax;
>
> (4) that the grammar of any language conforms, or can be made to conform to, the rules of formal logic.[24]

Alva points out that traditional grammar continues to be taught, with varying degrees of emphasis, in the schools despite the opinion of many researchers that traditional grammar is non-scientific in its origins, its analysis, and in its methodology, and that instruction in it does not result in improved speaking or writing.[25] In making this criticism of traditional grammar, Alva includes in a footnote the following statement by Walter V. Kaulfers: "There is no scientific study of the many available in English and foreign languages which has shown that sentence analysis, diagramming, parsing, or nomenclature drill is of the slightest benefit in improving a person's personal use of language."[26]

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[24] Edward L. Anderson, "The Nature of Our Grammar," English Journal, XLIV (May, 1955), 513.

[25] Alva, op. cit., p. 22.

[26] Walter V. Kaulfers, Four Studies in Teaching Grammar from the Socio-psychological Viewpoint, Stanford University Bookstore, Stanford University, California, 1945, pp. 46-47.

H. A. Gleason, Jr., believes that it is diagramming that has become the focus of criticism of traditional grammar teaching.[27] He points out that most English teachers in the schools can draw diagrams, but few know anything of their origin and history, and, more seriously, few understand the basic rationale. As a result, Gleason contends, diagramming has generally been taught as a meaningless mechanical operation, thoroughly disliked by most teachers and almost all students. Thus the major difficulty with Reed and Kellogg diagramming, the form most prevalent in the schools, has been prevailingly bad teaching.[28] Viewed in this light, it is the misuse of diagramming which is at fault, not the traditional grammar of which it is a part.

Balloon Diagrams and Earlier Forms

In an attempt to trace the history of the Reed and Kellogg form of diagram and to discover forms which came before, the writer corresponded with H. A. Gleason, Jr., asking for resource material. According to Gleason there is none available:

"It is very difficult to trace the history of any aspect of school grammar. The only sources are textbooks, and these almost never acknowledge their sources, so that the only possibility is through search through large numbers of publications looking for tell-tale similarities. For your purposes, however, I doubt that there is much point in going behind Reed and Kellogg. So this means going through a large number of textbooks published in the last century and comparing. That alone would be a monumental task."[29]

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[27] H. A. Gleason, Jr., Linguistics and English Grammar (New York: Holt, Rinehart and Winston, Inc., 1963), p. 143.

[28] Ibid.

The writer was able, however, to utilize a copy of Dr. Priscilla Tyler's dissertation which reviewed English Grammars up to 1850. In 1850 graphic devices were developed to indicate sentence structure. According to Tyler, at this time:

> Syntax is on the wane; diagramming is getting started and will take the place of "syntactical and etymotogical parsing" in the rooms of teachers with mechanical inclinations. Clark is looked to as an authority on diagramming. Jewell writes a supplement to Clark but acknowledges Clark his master.[30]

Stephen W. Clark's system of diagramming in Analysis of the English Language recognized twenty-six patterns of diagramming. This system had been modified by the end of the century to give rise to the pattern of diagramming now familiar. Alonzo Reed and Brainerd Kellogg seem to be responsible for the final steps. Little more was required than substituting lines for balloons, elaborating a few details, and adding characteristic separators between different elements: ———┼——— between subject and predicate, ———┴——— between verb and direct object, ———\——— between verb and predicate nominative. The major sentence elements were put on a single straight line, the modifying elements were hung on this, thus indicating clearly their subordinate status. To further emphasize the importance of the subject, verb, and object, this line was drawn heavier. Such a diagram serves as an excellent representation of sentence structure as conceived by the advocates of "sentence analysis."[31]

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[29] Gleason letter, Appendix I.

[30] Priscilla Tyler, "Grammars of the English Language to 1850: With Special Emphasis on School Grammars Used in America" (Ph. D. dissertation, Western Reserve University, 1963), p. 624.

On the following pages are included reproductions of Stephen W. Clark's balloon diagrams. These photographs clearly illustrate the diagramming form upon which the Reed and Kellogg system is based. The photographs are reproductions from the Tyler dissertation.

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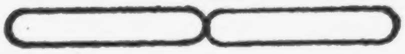
[31] Gleason, _op. cit._, pp. 73-74.

12 Diagrams from
Classification of Sentences and Phrases
Stephen W. Clark
Analysis of the English Language, 1851, pp. 54-55

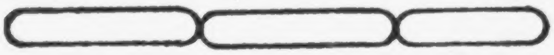
Diagrams. . . . . .adapted to
Subject-Predicate-Object

A



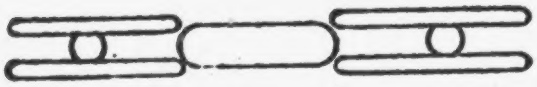
...a Simple Sentence--
Intransitive
Example. "Landscape fades."

B



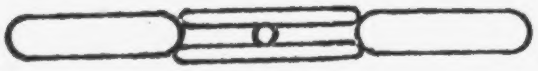
...a Simple Sentence--
Transitive
Ex. "Master taught school."

G



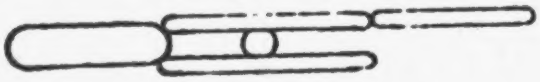
...a Compound Sentence--
Transitive
Ex. "Liberty and Union promote peace and safety."

H



...a Compound Sentence--
Transitive
Ex. "State conforms and models life."

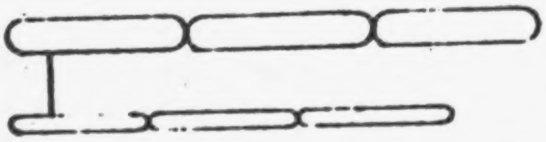
L



...a Compound Sentence--
Mixed
Ex. "He breathes fragrance and sleeps."

N

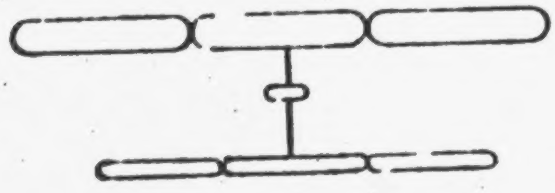
Nn



...the Principal Sentence
Ex. "He loveth soul."
...Auxiliary Sentence--
adjective
Ex. "That getteth wisdom."

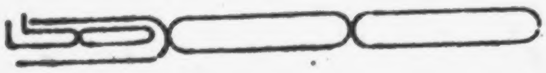
O

Oo



...the Principal Sentence
Ex. "He will make apology."
...Auxiliary Sentence--
adjective
Ex. "If John has injured. you."

Pp

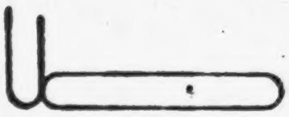


a Sentence having a Phrase
for its Subject
Ex. "Finding fault, discourages youth."

Diagrams (Cont.)

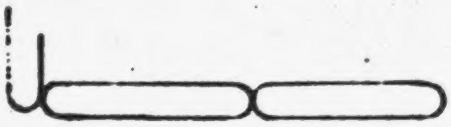
Phrases

R



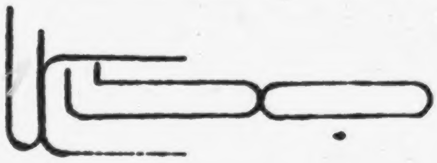
...a Prepositional Phrase--
Simple
Ex. "Of Java."

T_2



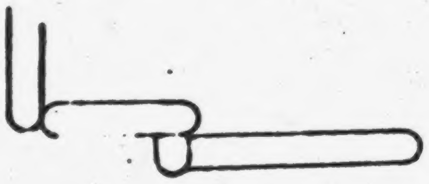
...an Infinitive Phrase--
Transitive
Ex. "To give gifts."

V



...a Participial Phrase
the Object of a Preposition
Ex. "Of sponging themselves."

W



Principal Phrase Prepositional, or Infinitive.
Auxiliary Phrase Prepositional, or Infinitive.
Ex. "On bed of sea-flowers."[1]

---

[1] Clark's Classification lists twenty-six (from "A" to "Z") diagrams. Alphabetical letters here correspond to those of the original.

Reed and Kellogg Diagrams

The Reed and Kellogg system of diagramming was brought to its present form by Alonzo Reed and Brainerd Kellogg in Higher Lessons in English in 1909. Gleason mentions earlier editions in 1877, 1885, and 1896. This system was designed to reflect the base-and-modifier description which prevailed in American school grammar.[32] With varying amounts of modification it continues in use in many school textbooks, generally known simply as "diagramming," since there is usually no other system included from which it must be distinguished. The exact same system of diagramming is used in Homer C. House and Susan Emolyn Harman's Descriptive English Grammar, 1950, second edition. A comparison of any of the current textbooks for high school use with Reed and Kellogg or House and Harman will reveal, in most cases, a great deal of abridgment and simplification.[33] Not only does this increase the number of sentences that cannot be diagrammed but also it results in a loss of usefulness in the resulting diagrams. Consequently, according to Gleason, any fundamental deficiencies of diagramming are deficiencies of the underlying analysis or of misuse in the schools, not of the graphic device.[34]

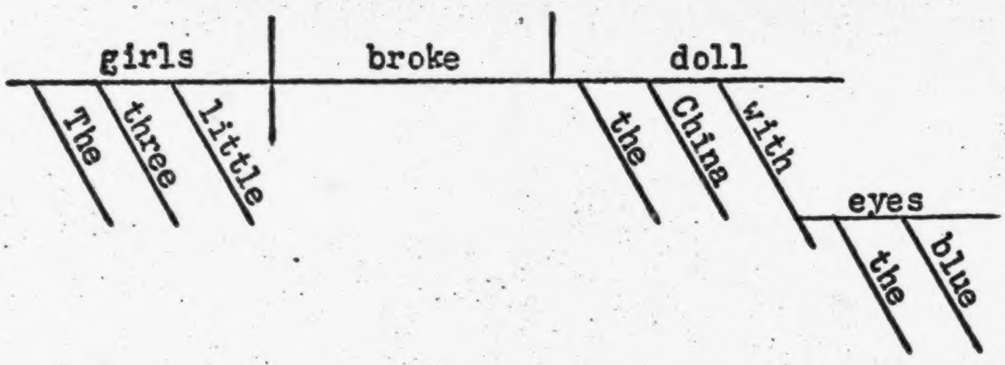
---

[32] "British school grammar is similar in many ways to American, differing most noticeably in the total absence of Reed and Kellogg diagramming." Gleason, op. cit., Preface vi.

[33] Gleason cites A Grammar of Present-day English by Pence and Emery, a college-level textbook, as an example of a text which presents a comprehensive and responsible modification of Reed and Kellogg diagramming.

[34] Gleason, op. cit., pp. 142-143.

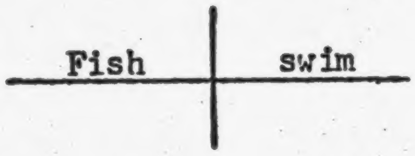
Gleason considers the Reed and Kellogg diagram a very effective device for exhibiting the school grammar analysis of English sentences.[35] It is a typical base-and-modifier technique. The sentence--"The three little girls broke the china doll with the blue eyes"--would appear:


girls
broke
doll
The
three
little
the
China
with
eyes
the
blue

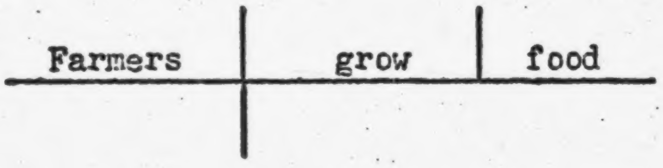
In the illustration the clause base is represented by a horizontal line. This is drawn heavier than other parts of the diagram in order to indicate its primary importance.

In Reed and Kellogg diagramming there are four basic patterns:[36]

a. Fish swim. subject-verb (no complements)



b. Farmers grow food. subject-verb-direct object


Farmers
grow
food

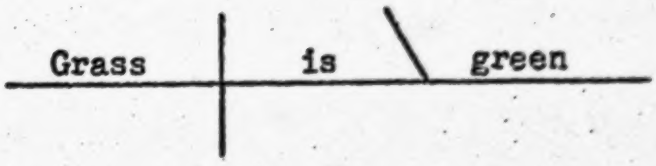
---

[35] For the analysis of the Reed and Kellogg system of diagramming, the writer has followed Gleason, pages 142-151, entirely with only the slightest modification.

[36] Gleason, op. cit., p. 143.

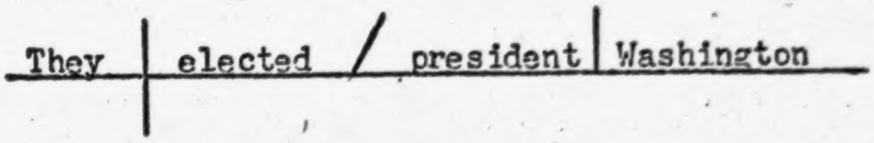
c. Grass is green.

subject-verb-subjective complement


Grass
is
green

d. They elected Washington president.

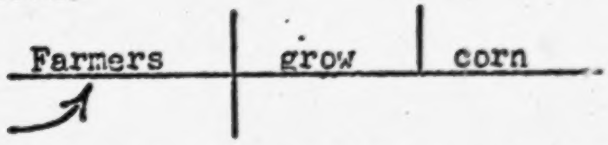
subject-verb-objective complement-direct object


They
elected
president
Washington

Within these four patterns the following basic devices are employed:

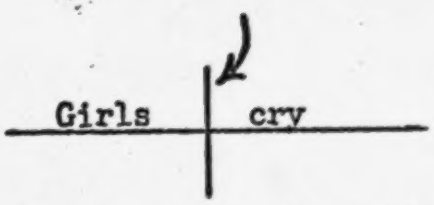
1. Major sentence elements are written on a horizontal base line drawn heavier than other lines in the diagram.

Farmers grow corn.


Farmers
grow
corn

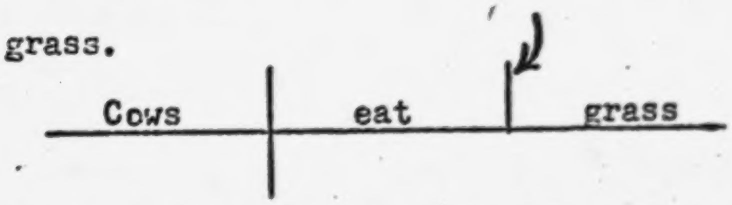
2. Subject and predicate: A short vertical line crosses the base line and separates the subject from the predicate.

Girls cry.



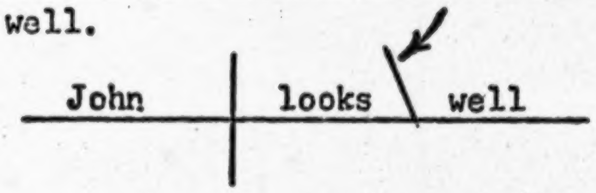
3. Direct object: A short vertical line rises from the base line and separates it from the verb.

Cows eat grass.


Cows
eat
grass

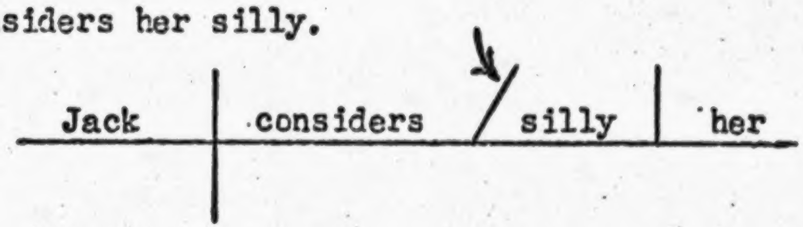
4. Subjective complement: A short line rises from the base line and slants to the left pointing back at the subject (predicate nouns and predicate adjectives are not distinguished).

John looks well.


John
looks
well

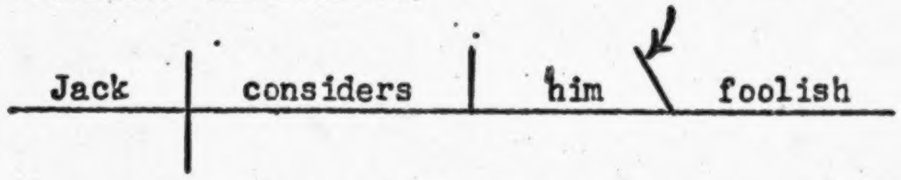
5. Objective complement: A short line rises from the base line and slants to the right pointing ahead toward the object. (A variant is to place the objective complement after the direct object with the marker slanting to the left.)

Jack considers her silly.


Jack
considers
silly
her

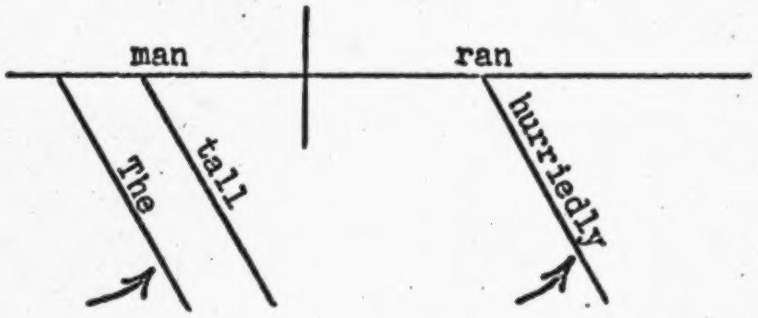
or

Jack considers him foolish.


Jack
considers
him
foolish

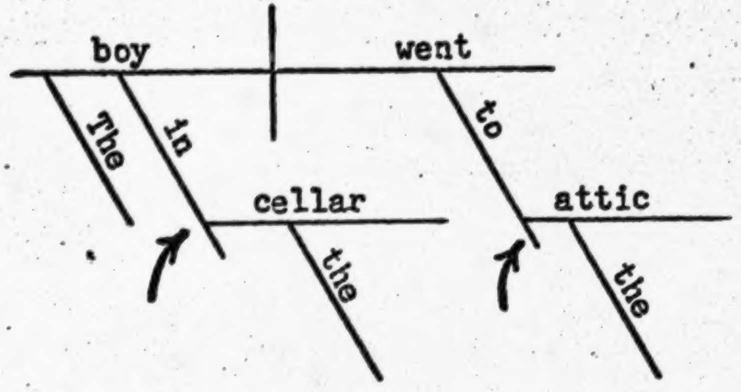
6. Modifiers: Slant lines hang below the base line. Those below verbs lines are adverbs; those below subject and noun complement lines are adjectives.

The tall man ran hurriedly.


man
ran
The
tall
hurriedly

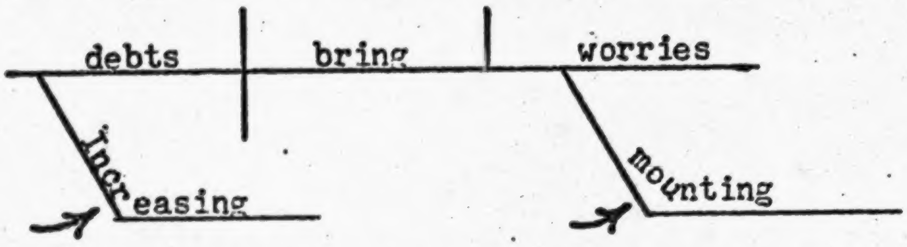
7. Prepositional phrases: On a pattern of two lines, one is slanted like a modifier; the other is horizontal, like the noun and verb lines of the base.

The boy in the cellar went to the attic.


boy
went
The
in
to
cellar
attic
the
the

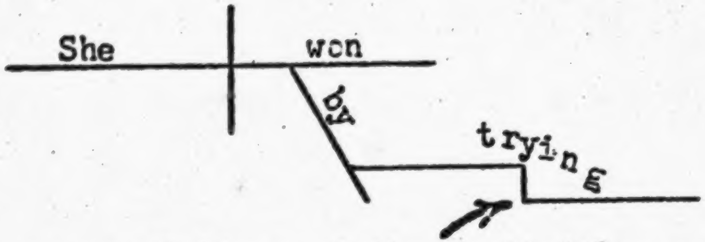
8. Participles: A single line bends from the adjective slant to the horizontal position used for verbs.

Increasing debts bring mounting worries.


debts
bring
worries
Increasing
mounting

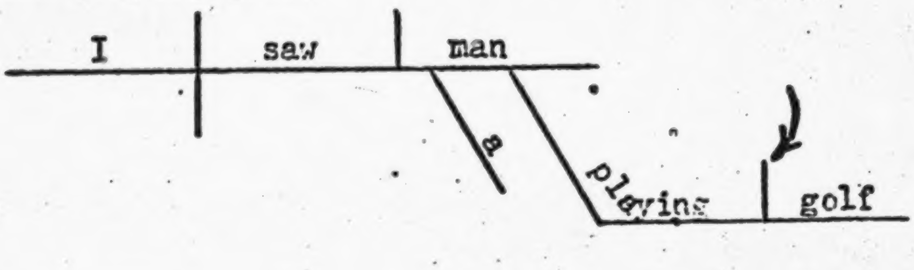
9. Gerunds: Two horizontal segments join with a vertical break between.

She won by trying.

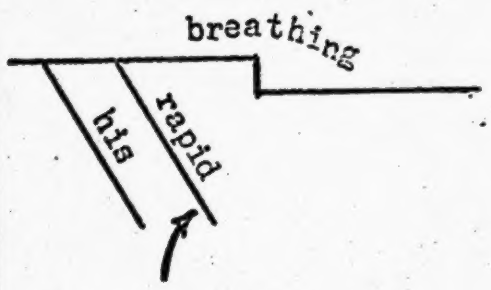

She
won
by
trying

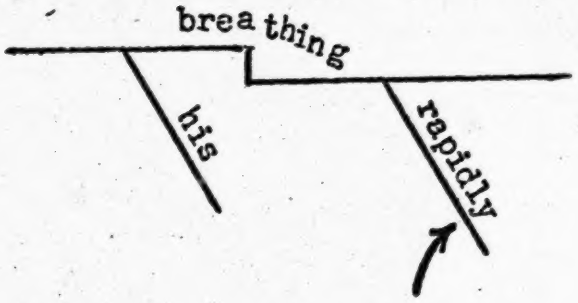
10. The horizontal lines of the participles, gerunds, and prepositional phrases containing verbs can be long and bear a complement. In this case the line is lighter than the base line, although the same dividers are used.

I saw a man playing golf.


I
saw
man
a
playing
golf

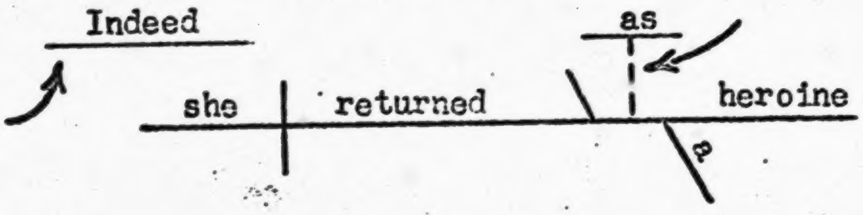
11. Slant lines for modifiers may be hung below any horizontal line. In the case of the gerund, adjectives hang before the break (the noun portion of the line) and adverbs after. (This is one of the few instances where types of modifiers are distinguished.)


breathing
his
rapid


breathing
his
rapidly

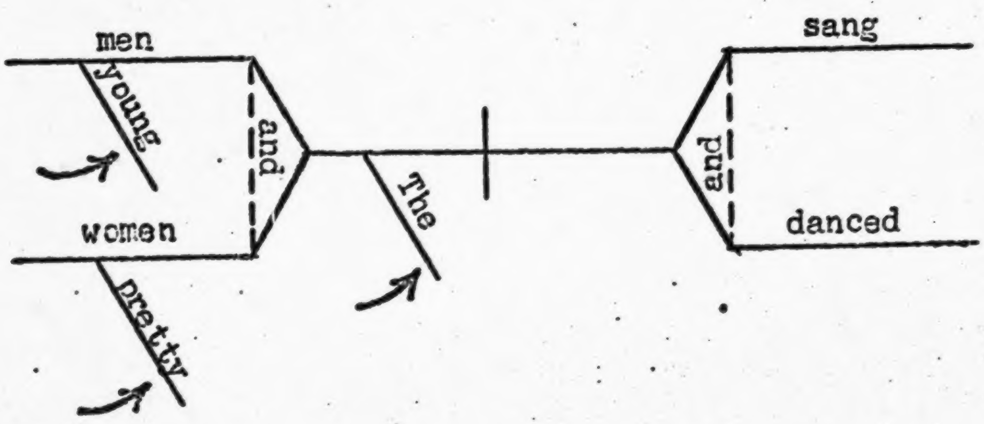
12. Expletives: Elements of loose connection to the sentence are written lightly on separate lines above the main diagram. If related to some part of the sentence, they may be joined with a dashed line.

Indeed she returned as a heroine.


Indeed
she
returned
as
heroine
a

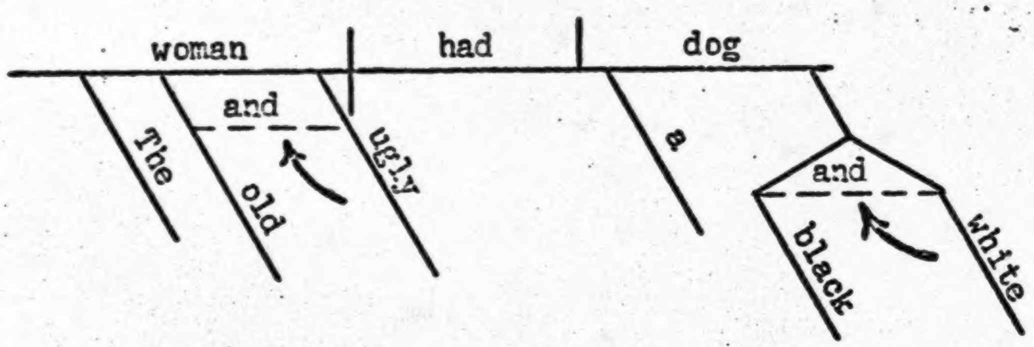
13. Compound elements are written on forked lines, modifiers of the whole hung on the single stem, and modifiers of individual parts hung on the separate parts.

The young men and pretty women sang and danced.


men
young
and
women
pretty
The
and
sang
danced

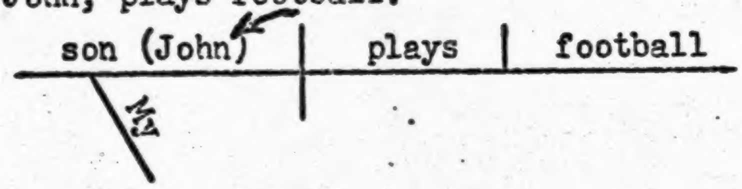
14. Conjunctions: Dashed lines join the parts connected with the conjunction written above.

The old and ugly woman had a black and white dog.


woman
had
dog
The
and
old
ugly
a
and
black
white

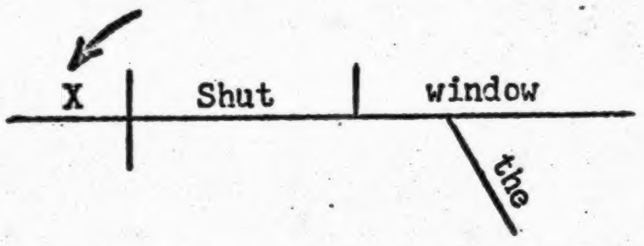
15. Appositives: Parentheses enclose appositives after the elements with which they are in apposition.

My son, John, plays football.


son (John)
plays
football
My

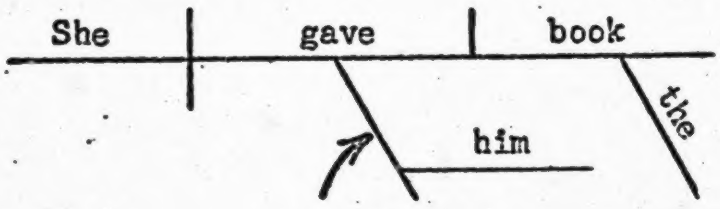
16. An X is written in the place of understood items.

Shut the window.

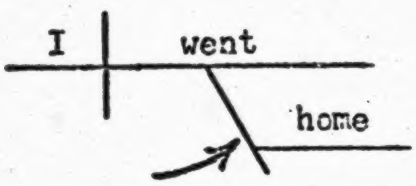

X
Shut
window
the

17. Indirect objects and nouns used as adverbs are diagrammed as phrases.

She gave him the book.


She
gave
book
him
the

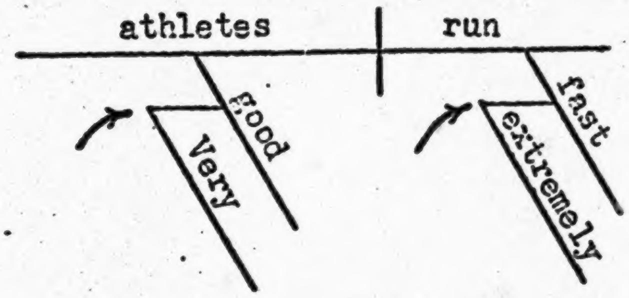
I went home.



There are three minor devices which are mechanical provisions for connecting pieces, rather than indications of structure. They are required more by the geometry of the diagram than the structure of the sentences.

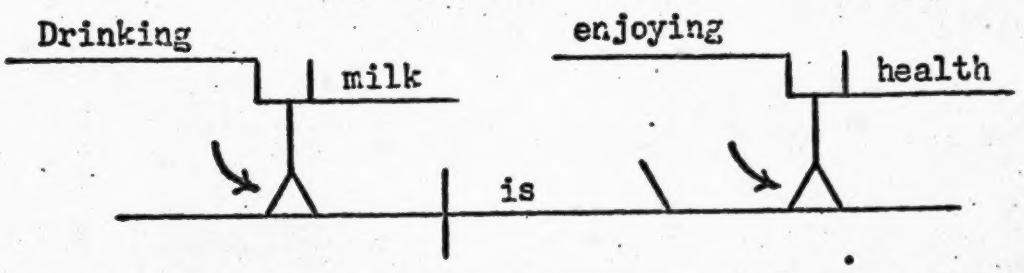
18. One slant line is connected to another by a short horizontal line.

Very good athletes run extremely fast.


athletes
run
good
Very
fast
extremely

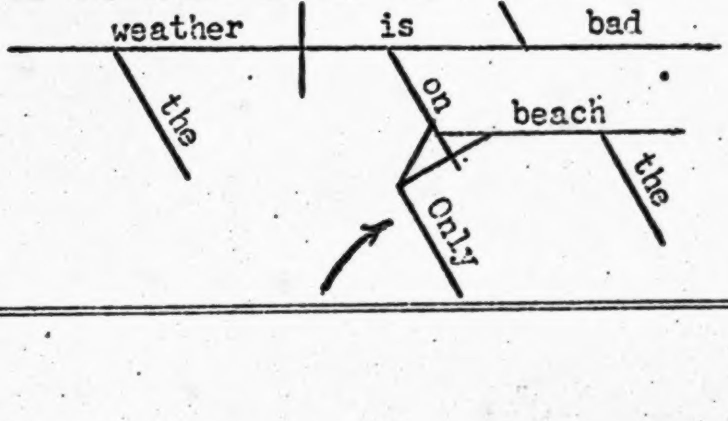
19. Phrases, gerunds, participles, or clauses on horizontal lines are placed on stilts.

Drinking milk is enjoying health.


Drinking
milk
enjoying
health
is

20. To indicate that the phrase as a whole is modified, not merely the preposition, a pair of short lines joins a modifier to both lines of a prepositional phrase.

Only on the beach is the weather bad.


weather
is
bad
the
on
beach
the
Only

These twenty examples comprise all the devices which are used in the Reed and Kellogg system of diagramming. This system is, however, far less successful in showing the structure of compound and complex sentences than in handling simple clauses like those above. In regard to compound and complex sentences, Gleason explains:

> The devices used consist of little more than variants of those shown. Some clauses are placed within others by means of stilts. Others are connected by dashed lines. The difficulties arise when one word serves two functions, both of which should be recognized in the diagram. For example, a word may be an important structural element within one clause and also serve as a mark of connection of that clause to another. In these instances, there seems to be little agreement in conventions, and some books are hardly able to maintain their own internal consistency.[37]

---

[37] Gleason, *op. cit.*, footnote, p. 151.

CHAPTER III

DESCRIPTIVE ENGLISH GRAMMAR

Linguistics, the study of language, is considered to date from the work of Panini, a scholar in India in the third century before Christ, who formulated an algebraic or pattern-symbolic description of Sanskrit.[38] Although his work had little effect on the grammars of Dionsyius Thrax or Donatus, its rediscovery in the nineteenth century proved useful to linguists.[39]

> The Indian grammar presented to European eyes, for the first time, a complete and accurate description of a language, based not upon theory but upon observation.[40]

Opinion is divided as to an exact date for the beginnings of modern linguistic science in America and as to which linguist should receive major credit.[41] Carroll believes that Franz Boas (1858-1942) of Columbia University, who worked in the field of American-Indian languages "set the stage" and that later developments were influenced mainly by Edward Sapir (1884-1939) and by Leonard Bloomfield (1887-1949).[42]

But Archibald Hill makes the strongest case as to which linguist exerted the greatest influence by citing the work of Bloomfield, who formulated the American study of phonemics and who gave American linguistics its basis for believing that differences in meaning come from formal differences and that it is the latter we should study.[43]

---

[38] Benjamin Lee Whorf, Language, Thought, and Reality: Selected Writings of Benjamin L. Whorf, edited by John Carroll (New York: Wiley Co., 1956), p. 232.

[39] Ibid.

[40] Bloomfield, op. cit., p. 11.

[41] Alva, op. cit., p. 25.

[42] John Carroll, The Study of Language (Cambridge, Mass.: Harvard University Press, 1955), p. 20.

Dykstra gives this summary of the work in the development of systematic analyses of linguistics:

> . . . early in the nineteenth century, before any appreciable development of descriptive or structural techniques beyond what had been inherited from the ancients, detailed techniques were developed for comparative studies. These culminated in the uneqivocal establishment of genetic relationships among language "families" and laws of sound correspondences between languages. Later developments brought corresponding techniques to the study of historical change in language. From this developed the contention that linguistic laws have no exceptions. Establishment of procedures for Structural Linguistics were enunciated. The primary concern of structural linguistics is the isolation of those formal features of speech which signal linguistic meaning.[44]

The "principles and procedures" referred to above are generally found in the following linguistic works: Bloomfield's *Language* (1933); Fries' *American English Grammar* (1940); Bloch and Trager's *Outline of Linguistic Analysis* (1942); Nida's *Synopsis of English Syntax* (1943); Pike's *Intonation of American English* (1945); Trager and Smith's *Outline of English Structure* (1951); and Fries' *The Structure of English* (1952).[45]

In general there is agreement among linguists as to some of the principles upon which they have founded their analyses of language processes.[46] Roberts' list is given here:

---

[43] Archibald Hill, "Linguistics Since Bloomfield," *Quarterly Journal of Speech*, XLI (October, 1955), 252.

[44] Gerald Dykstra, "Linguistics and Language Teaching," *Teachers College Record*, LIX (May, 1958), 460.

[45] Alva, *op. cit.*, p. 27.

> 1. The first essential principle is that language is primarily speech and secondly writing.
>
> 2. The second necessary principle is that language normally changes, and that change in language is neither good nor bad.
>
> 3. A third principle is that correctness in speech is relative to time, place, circumstance, and other features of the environment.
>
> 4. The fourth principle is that a native speaker of a language, however ignorant, knows the grammar (inflections, syntactic arrangements, and sound structure) of that language.
>
> 5. A fifth principle is that there is no universal grammar; there is no system into which all languages can be fitted.[47]

Two books mentioned above, Trager and Smith's An Outline of English Structure and Fries' The Structure of English, form the basis of an eclectic system of grammar which developed in the mid-fifties. The syntax of Fries is teamed with the phonology of Trager and Smith to give a useable combination on which to base a new eclectic grammar that can be applied to an English teaching curriculum. From this beginning the so-called "new grammar" movement evolved and linguistics moved into the classroom.[48]

> . . . linguistics became almost regular in English curriculum discussions. Experimental teaching began to increase. Rapid expansion awaited only the appearance and general availability of satisfactory textbooks.

---

[46] Ibid.

[47] Paul Roberts, Understanding English (New York: Harper and Bros., 1958), p. xi.

[48] Gleason, op. cit., p. 21.

> The year 1956 saw the first such publications. Two appeared for college "freshman English": Harold Whitehall's Structural Essentials of English and Donald Lloyd and Harry Warfel's American English in its Cultural Setting. One was written for high schools: Paul Roberts' Patterns of English. In the next few years several additional college textbooks appeared. High school materials came out more slowly, mostly in mimeographed and near-print form for local use.[49]

Before this "new grammar" tradition consolidated, a new movement within linguistics appeared--transformational-generative grammar. Paul Roberts' English Sentences (1962) is the first textbook to show influence from this source. Other texts now appearing represent a wide variety of approaches to transformational grammar. Syrell Rogovin's Modern English Sentence Structure (1964) is being widely used. Thus, according to Gleason, the "establishment of a 'new grammar' orthodoxy has been effectively forestalled. In the process, further complexity has been injected into an already confused picture."[50] Nevertheless, linguistics, whether based on structural or transformational-generative grammar, is a part of the high school English curriculum. Experimental teaching continues to increase and the use of new materials is spreading. In these new materials diagrams are included.

Linguistic Diagrams

There are many diagrams that have their basis in linguistics. Most of them, however, are variations of four basic types: the IC tree diagram (a form of the branching tree), the slot-and-filler diagram, the Chinese box diagram, and the transformational tree diagram. The IC tree diagram and the Chinese box diagram are immediate constituent (IC) diagrams. The slot-and-filler represents a different technique of analysis. The transformational tree diagram is an accessory to transformational-generative grammar; its form, however, is a variation of the branching tree.

---

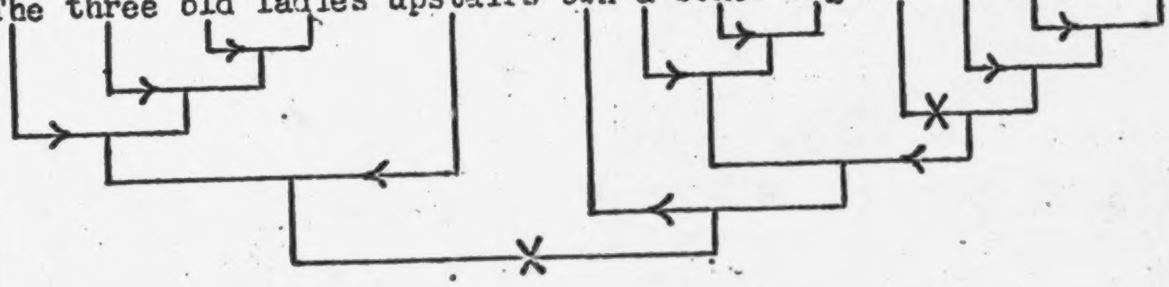
[49] Ibid.

[50] Ibid.

The following examples of diagrams are taken directly from Gleason:

1. the IC tree diagram[51]

The three old ladies upstairs own a boxer dog with a mean temper.



The technique underlying the above diagram operates on the assumption that most constructions will have only two parts. Thus the sentence is divided into *the three old ladies upstairs* and *own a boxer dog with a mean temper*. These two are the immediate constituents of the sentence. Next each of these is divided into its immediate constituents. The second, for example, is cut into *own* and *a boxer dog with a mean temper*. Although the three major sentence elements have appeared, they are not coordinate parts of the sentence. One is an IC of the sentence. The other two are IC's of the predicate. Only the immediate components of the construction are relevant at each stage of the analysis. Also there is no requirement that parts of the IC be equal in size. Each fraction of the sentence is examined and cut into two until ultimate indivisible units are reached.[52]

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[51] Gleason, *op. cit.*, p. 151. There is no standard graphic representation of IC structure. Many different systems of IC diagramming are in use. Some differ only in physical form; others reflect some modification of the underlying analysis. The one illustrated is, according to Gleason, the simplest and most generally useful. The system of marking is that of Eugene Albert Nida, *A Synopsis of English Syntax*, 1960.

Each horizontal line in the diagram represents a construction and each vertical line a constituent. The words at the top represent the ultimate constituents. The lowest horizontal line represents the sentence. It has no vertical line leading down from it, since the sentence is not a constituent of anything. The vertical lines at each end of a horizontal line represent the two immediate constituents of that construction. Each constituent consists of all the words which can be reached by going up the tree from the line that represents it.[53]

2. the slot-and-filler diagram[54] (illustrated on the following page)

The slot and filler approach starts by recognizing a subject-verb-object sentence. These elements are not identified as single words, rather: the three old ladies is the subject, own is the verb, and a boxer dog with a mean temper is the direct object. Two of these are noun phrases. Each noun phrase is considered as having a number of positions called slots. For each slot there are specified fillers. One of these is designated the head; the others are modifiers. The head slot is usually filled. The other slots can be designated by counting outward from the head. For example, N-5, which should be read as "N minus 5,"

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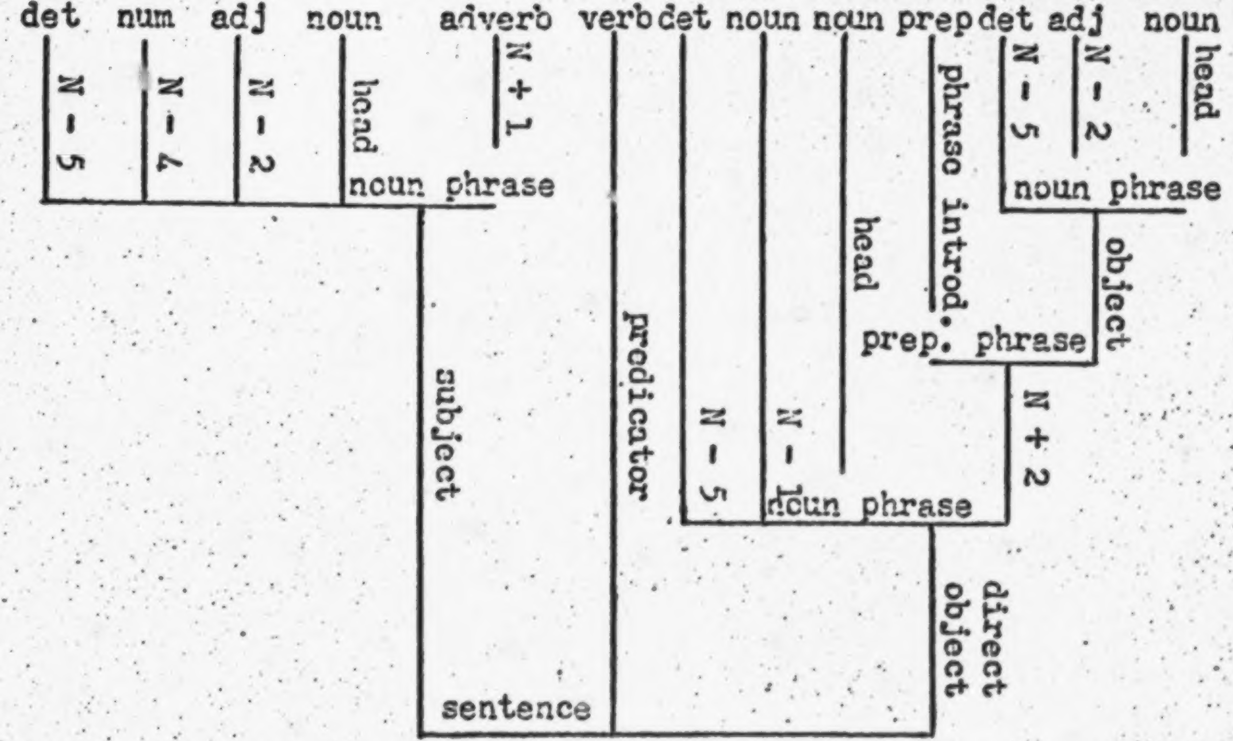
[52] Gleason, op. cit., p. 141.

[53] Gleason, op. cit., p. 152.

[54] Gleason, op. cit., p. 155.

The three old ladies upstairs own a boxer dog with a mean temper.


det
num
adj
noun
adverb
verb
det
noun
noun
prep
det
adj
noun
N - 5
N - 4
N - 2
head
N + 1
noun phrase
N - 5
N - 2
head
noun phrase
phrase introd.
object
head
prep. phrase
N + 2
N - 5
N - 1
noun phrase
subject
predicator
direct object
sentence

means the fifth slot before the noun. Each slot is filled by certain types of determiners. The following scheme is given here to explain the example:

Slots	N-5	N-4	N-2	N-1	N	N+1	N+2
Fillers	Determiners	Numerals	Adjectives	Nouns	Nouns	Adverbs	Prep. Phrase
	the	three	old	---	ladies	upstairs	---
	a	---	---	boxer	dog	---	with a mean temper
	a	---	mean	---	temper[55]		

"In this scheme, N-3 is filled by specifers (*other*, *same*, *chief*), ordinal numbers, and superlative adjectives: *the two other new books*, *the three best literary contributions*. N-6 is filled by predeterminers (*all*, *both*, and *half*): *all those men*, *half the time*. The positions after the head are less clearly distinguishable, and many details are still uncertain."[56]

In the slot and filler technique the sentence as a whole is described in terms of a construction having at least three slots.[57] Each of the three may be filled by a single word, in which case no further analysis is necessary or by a phrase, in which case each phrase is described in terms of a series of slots--as illustrated above--and the appropriate fillers. This is repeated until ultimate constituents are reached.

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[55] Gleason, *op*. *cit*., p. 139.

[56] *Ibid*.

[57] Gleason does not explain how a two-word sentence is handled in terms of a three-slot analysis.

Gleason explains the difference in the IC and slot-and-filler techniques in the following way:

> The IC and slot-and-filler techniques are alike in building up larger constructions from smaller, rather than hanging extra elements on a basic skeleton. They differ in several ways. The IC approach builds out of pairs of units whenever possible. The slot-and-filler technique has no restriction as to the number of constituents in a construction. The IC approach, therefore, often goes through more steps from word to sentence, but they may be much simpler steps. The slot-and-filler technique must describe many unfilled slots, for example, the N-4 (numeral) and N-2 (adjective) slots in _a boxer dog_. The IC approach, however, does not do this--each construction is described as complete in itself. The IC technique emphasizes the relation between the partners in a construction; the slot-and-filler technique emphasizes the place of each component in a larger whole.[58]

3. the Chinese box diagram[59] (illustrated on the following page)

A basically different graphic structure in IC analysis is the Chinese box diagram. This diagram clearly indicates the notion of constructions nested within constructions. This sentence diagrammed next follows the system of W. Nelson Francis.[60]

According to Francis there are four basic types of syntactic structure: structures of modification, structures of predication, structures of complementation, and structures of coordination. All larger structures are combinations of these. Regardless of how complicated a structure may be, it can always be analyzed in terms of these four. As in other IC diagrams each structure may be divided into its immediate constituents, almost always two, each of which may in turn be divided

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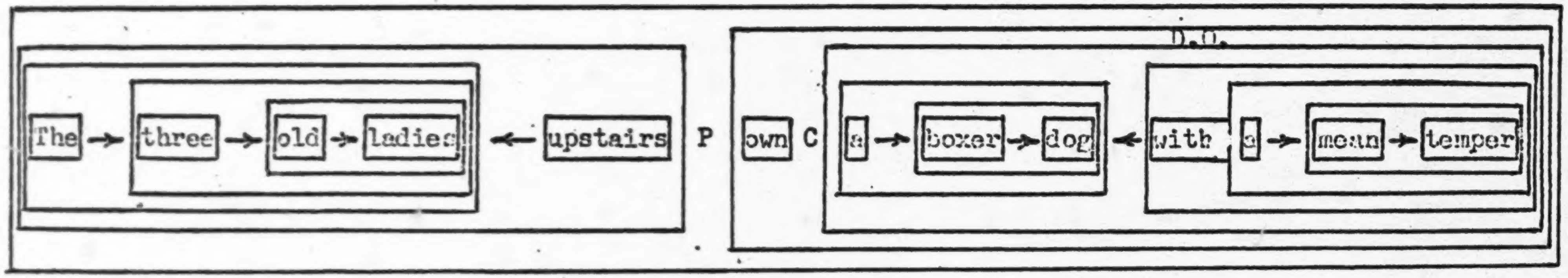
[58] Gleason, _op. cit._, pp. 141-142.

[59] W. Nelson Francis, _The Structure of American English_ (New York: The Ronald Press Company, 1958).

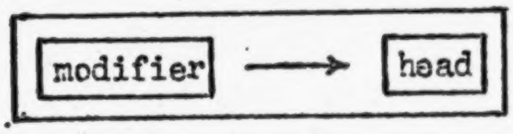
[60] Gleason, _op. cit._, p. 156.

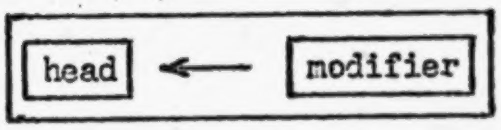
The three old ladies upstairs own a boxer dog with a mean temper.


The
three
old
ladies
upstairs
P
own
C
D.O.
a
boxer
dog
with
a
mean
temper

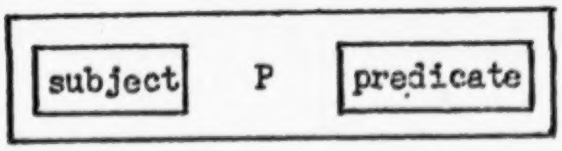
and subdivided until the ultimate constituents are reached. This is graphically illustrated by enclosing each ultimate constituent in a box and drawing progressively larger boxes around the immediate constituents of each structure as they are formed.[61]

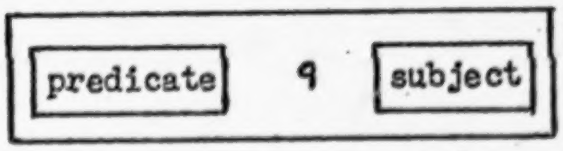
The four different structures are marked by placing simple symbols between the two immediate constituents. (1) Modification, made up of a head and modifier, is marked by an arrow ⟶ pointing from the modifier toward the head:


modifier
⟶
head

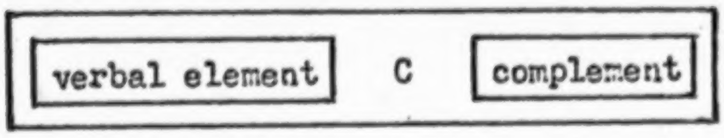

head
⟵
modifier

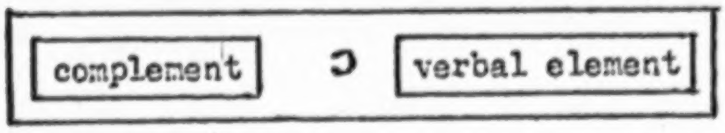
(2) Predication, made up of a subject and a predicate, is marked with a capital P facing the predicate. When the subject follows the predicate, the P is reversed:


subject
P
predicate


predicate
ꟼ
subject

(3) Complementation, made up of a verbal element and a complement, is marked similarly:


verbal element
C
complement


complement
Ɔ
verbal element

Within the complement, elements are identified by labeling their boxes with initials: DO for direct object; IO for indirect object; SC for subjective complement; and CC for objective complement.

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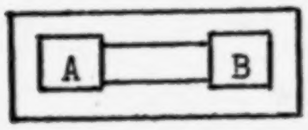
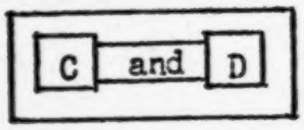
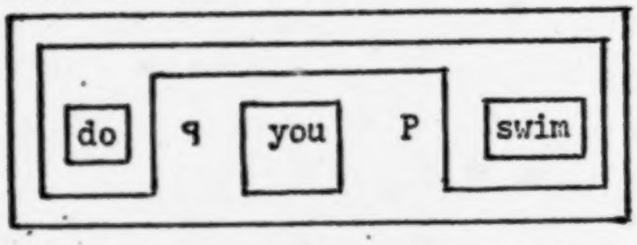
[61] Francis, op. cit., pp. 292-293.

(4) Coordination, made up of equivalent grammatical units joined often by a special kind of function word, such as and or neither . . . nor, is indicated by parallel lines connecting the constituents. When a function word is present, it is written between these lines:

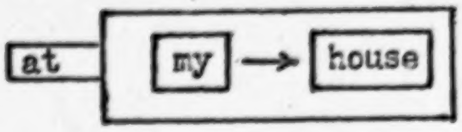




Split structures are indicated as follows:



Prepositions are put into a smaller box which is connected to the bo containing the object:



An advantage of the Chinese box system is that the words in the sentence being analyzed are left in the order in which they normally appear. Francis explains this as follows:

> Most systems of diagramming in common use depend on rearranging the words and word groups of the structure being diagrammed in order to place them in a geometric pattern which reveals their logical relationship. There are two serious objections to this procedure. (1) Since it is based on a logical (meaning-based) understanding of what the structure means, it reveals the logic, rather than the grammar, of the structure. (2) By rearranging words, it obliterates the part played by word order, one of the basic syntactic devices of English. Systems of

> diagramming that depend on rearrangement thus conceal grammatical structure instead of revealing it.[62]

To Francis, then, the Chinese box is the best graphic device for revealing grammatical structure.

The IC tree, the slot-and-filler, and Chinese box are parts of descriptive grammar. Descriptive grammars deal with the problem of providing an analysis for a given sample of language--a sentence, for example. A grammar, however, can be organized in a very different way.[63] Rather than analyzing a given sentence or finite corpus of sentences, a grammar can be concerned with producing or generating sentences, the possibilities of which could be infinite. Such a grammar is called generative grammar. A generative grammar is designed to define the notion of a sentence in English. Hence the rules of the grammar are stated in a form which allows it to be read either as a set of propositions generating sentences or as directions for producing sentences.

The type of generative grammar becoming more prevalent in the schools is transformational-generative grammar--generally spoken of as simply transformational. The first book that presented the notion of transformational-generative theory was Noam Chomsky's Syntactic Structures, published in 1957. In the schools, however, the works of Paul Roberts are more familiar. Roberts' Patterns of English (1956) says only a little about transformations--i.e., certain patterns are treated as secondary to his six basic sentence patterns. In English Sentences (1961), however, these subsidiary patterns are described explicitly in terms of transformations based on ten basic patterns.[64]

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[62] Francis, op. cit., p. 293.

[63] Gleason, op. cit., p. 222.

In approaching grammar the transformationalists postulate an intuitive knowledge which is formalized into rules from which sentences can be generated; whereas the descriptivists, or structuralists, start with a finite sample of sentences and inductively develop a set of rules to describe the language. From their formalized set of rules, derived intuitively, transformationalists begin with a small set of sentences--called kernel sentences--and transform these into more complicated structures. New sentences are thus generated through a process of transformation.

There is a distinction to be noted between the terms "transformational" and "generative." Owen Thomas differentiates between these terms as follows:

> . . . a generative grammar is one that contains a list of symbols, including--for example--English words, and a list of rules for combining these symbols in various ways to produce every English sentence. Such a grammar is said to "generate" or to "enumerate" all the possible sentences in a language. "To generate," however, does not mean "to produce." The number of sentences in English is potentially infinite . . . No speaker of English could possible [sic] *produce* this infinite number of sentences. But all speakers have some method of *understanding* completely novel sentences never spoken before, which means that they must have a way of "determining" all of the infinite number of sentences. In other words, rules that generate or determine are actually generalizations about language which permit a native speaker, among other things, to evaluate the grammaticality of any novel sentence.[65]

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[64] Gleason, *op. cit.*, p. 304.

[65] Owen Thomas, *Transformational Grammar and the Teacher of English* (New York: Holt, Rinehart and Winston, Inc., 1965), p. 8.

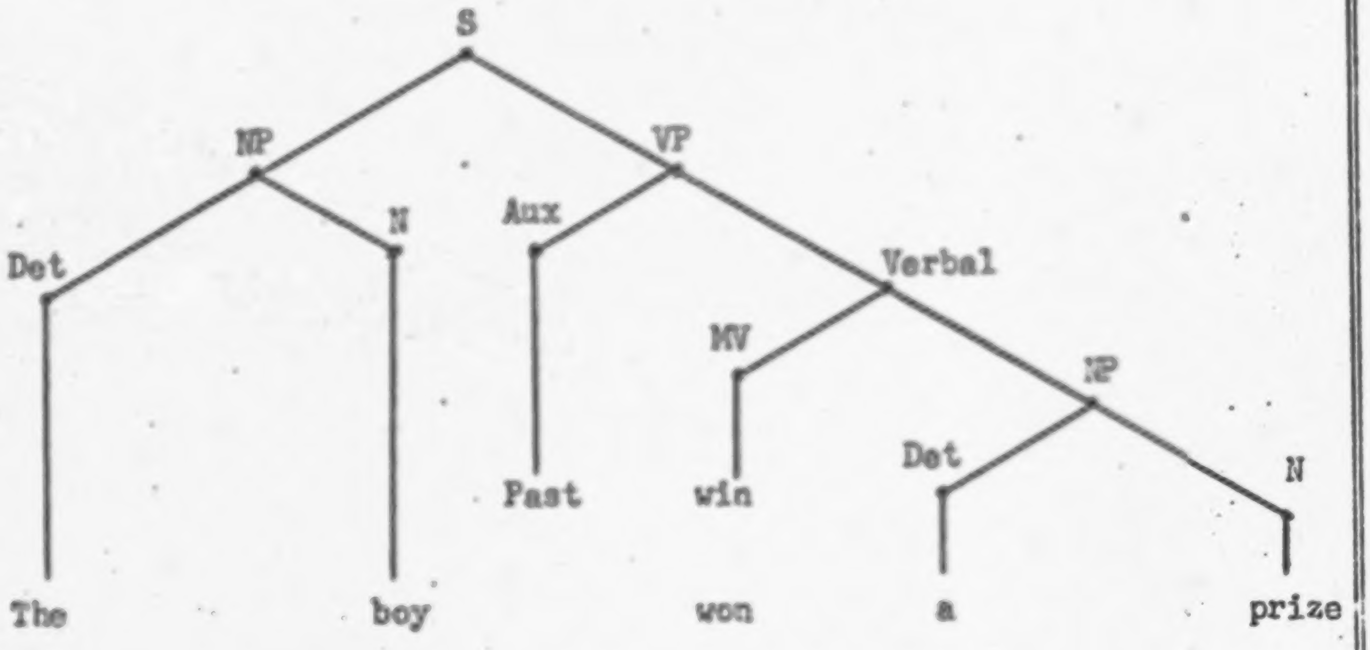
In conjunction with this concept:

> . . . we may say that a transformation is a rule which rearranges various elements that occur in English sentences. In terms of our earlier definition of a generative grammar as consisting of a set of symbols and a set of rules, we may say that transformations are rules which combine the symbols in various ways.[66]

The diagram below is a branching diagram commonly used in various types of linguistic analysis; but as a device illustrating transformational grammar, it is generally referred to as the transformational tree. This diagram illustrates what transformationalists term "deep structure," i.e., the composition of a sentence before transformational rules have been applied.

4. the transformational tree or branching diagram

The boy won a prize.



"deep structure"

By using symbols the diagram describes the underlying structure of the sentence. The key to the symbols used in this diagram are:

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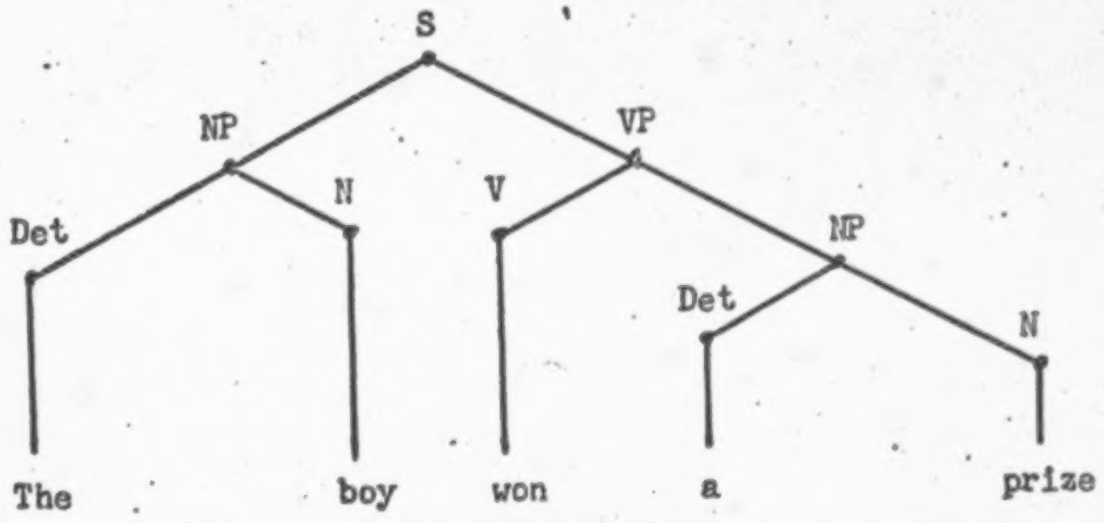
[66] Ibid., p. 9.

S = sentence
NP = noun phrase
VP = verb phrase
Det = determiner
N = noun
Aux = auxiliary
MV = main verb
Past = past tense

Transformationalists point out that other diagrams indicate only "surface structure" after transformational rules have already been applied. A branching IC diagram of the same sentence, The boy won a prize, for example, would show only the following:



"surface structure"

Whether used to indicate deep structure or surface structure, however, Owen Thomas considers the branching tree itself a unique form of graphic representation in that, "given a sentence which is not structurally ambiguous, there is one and only one way of representing it with this system."[67] Pointing out that "even a cursory check of several school grammars will indicate, there is wide disagreement among authors concerning the 'rules' of traditional diagraming," he believes that, in particular, the branching tree is superior in form to the traditional

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[67] Ibid., p. 30.

Reed and Kellogg:

> Once, while teaching a course called "English Grammar for Teachers," the writer assigned several apparently simple sentences for diagraming. The students were told to consult two or three different textbooks currently being used in high schools in the Middle West. In most cases, the students found three or four different ways of diagraming a single sentence. In one case ("I told him to take the book back."), they found seven ways; in another ("We asked for whoever might be there."), they found eight; and in one spectacular case ("He was older than his brother."), they found a total of ten different ways. The rules for making branching tree diagrams were designed, in part, to overcome this ambiguity.[68], [69] [The writer would like to point out here, however, that Gleason would not consider this type of ambiguity (i.e., varying interpretations) a problem to be overcome. (See Chapter IV, page 58.)]

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[68] Ibid.

[69] On pages 214-216 in Transformational Grammar and the Teacher of English, Thomas illustrates the eight different diagrammatical forms of the sentence, "We asked for whoever might be there,"--all following the Reed and Kellogg system and based on reputable--and current--school grammars.

CHAPTER IV

REVIEW OF CURRENT ARTICLES IN PROFESSIONAL JOURNALS

In looking for the merit and shortcomings of diagrams in the professional journals, the writer found that most articles were defenses of diagramming based on personal opinions or accounts of successful teaching experiences in which diagrams were used, sometimes combinations of both. The diagrams most often referred to were the Reed and Kellogg diagram. Hence, the writer will limit the review to this method.

In the early fifties, two articles were written in response to the Tovatt study. (The findings of this study are in Chapter I.) The first, written by high school teacher Zelma Becker, defends diagramming as a visual aid. She writes, "Mr. Tovatt's article did not question the teaching of grammar but the use of diagramming."[70] To justify its use, Miss Becker considers diagramming a pictorial presentation which supplements the other methods of teaching grammar. She is not concerned with its transfer value in other areas or with its utility in a student's future, but only with its usefulness in teaching sentence structure:

> "The first thing that grammar does to a sentence is to take it to pieces to break it up into its component parts, the words of which it is framed, and then to show how these are connected to form that composite thing which we call a sentence (Encyclopedia Americana)." If an illustration or a diagram can be an aid to showing how these parts are connected, its use is justified.[71]

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[70] Zelma Becker, "Discard Diagraming?" English Journal, XLI (June, 1952), 319.

[71] Ibid.

Herman O. Makey, writer of the second article in reaction to the Tovatt study, also looks at diagramming as a visual aid. But, in addition, Makey emphasizes diagramming as a method of sentence analysis--"a necessary step in getting meaning."[72] For Makey, "Diagramming should, obviously, . . . always be associated with analysis . . ." He explains:

> Analysis of sentences is important. Of course, one does not need consciously to analyze every sentence he hears or reads or every word in any sentence; but there is no true reading without a recognition of the word relations. Familiarity with common sentence patterns is not always sufficient, for careful thought often requires one to use less common patterns. So frequently analysis is the only means of clearing up difficulties in reading.[73]

Further, Makey asserts that it is in involved and complex reading that diagramming gives greatest aid. He believes that longer and more involved sentences require conscious analysis:

> Here is where the diagram gives its greatest aid. It shows at a glance what has been analyzed and also the relationship of these parts. Consequently, the pupil is much less likely to duplicate his work and can give his attention wholly to the work remaining to be done. For instance, if he has discovered that a word is a part of the complete direct object, it is evident that it cannot be a modifier of the verb or of the subject. Elimination of the parts already analyzed often helps him to see the relations of the remaining parts, for often the sight of the forest makes it impossible to see the trees.[74]

To Makey diagramming, then, is a method of sentence structure analysis indispensible as an aid in the area of involved reading.

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[72] Herman O. Makey, "A Means or an End?" English Journal, XLII (March, 1953), 159.

[73] *Ibid.*, p. 159.

[74] *Ibid.*, p. 160.

The most impressive defense of diagramming, however, was written by Professor Don M. Wolfe, a professor at Brooklyn College, in an article entitled "Diagraming: Trust Your Experience, Not Theories." Professor Wolfe points out that in some two hundred books on grammar in the New York Public Library, "not one contains research on the effectiveness of diagraming as a device for teaching the principles of grammar."[75] Wolfe is not unaware, however, of the studies done by Greene's students (discussed in Chapter II). His point is that:

> No one of these studies attempted solely to test the effectiveness of diagraming in teaching the principles of grammar as such. They attempted rather to test the correlation between ability to diagram and ability to read, to punctuate, to master points of usage, to use varied sentence structure, etc. The effectiveness of diagraming was correlated in the main with the pupil's improvement in language skills from direct grappling with errors in his written work.[76]

Wolfe contends that diagramming is useful in teaching grammar and that this is what should be investigated. Since he eliminates the work of Greene's students on the grounds that they failed to research the relationship between diagramming and grammar, he can conclude that there does not exist "any substantial evidence one way or another on the effectiveness of diagraming," for, in addition, he points out that Greene himself shows that no research had been published in the field between 1928 and 1941 and also that of 250 language studies listed by Lyman[77] in 1929 (going back to 1900), "not one had mentioned diagraming."[78] To Wolfe,

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[75] Don M. Wolfe, "Diagraming: Trust Your Experience, Not Theories," Clearing House, XXVII (February, 1953), 349.

[76] Ibid.

[77] See Chapter I, page 5, for Lyman's research.

[78] Wolfe, op. cit., p. 349.

"careful investigation on a broad scale is necessary . . . before any positive pronouncements can be made on diagraming as a technique for teaching grammar." He believes it is the effectiveness of diagramming in teaching grammar that is the real issue not the functional value of grammar itself, for he later adds, "The teaching of grammar as a system of language principles, not as incidental illumination of a pupil's errors in speech and writing, has a place, large or small, whether justified or not, in most American schools."[79]

Much of Wolfe's article deals with criticisms of diagramming by J. N. Hook, Lou LaBrant, and Dora V. Smith. In responding to the criticisms of Miss LaBrant writing in *We Teach English*[80] and Miss Smith's report with the Commission on the English Curriculum entitled *The English Language Arts*, Wolfe reiterates that the real issue on diagramming has not yet been resolved--i.e., "the question of whether diagraming and other forms of formal classification are efficacious in teaching grammatical principles."[81] Wolfe seems to believe they are, for while admitting in response to Miss LaBrant that "neither grammar nor diagraming can be helpful to writing in the sense of free personality expression, use of concrete diction, or principles of elementary semantics, such as the confusion of assumptions with facts," and that "a high degree of fluency and accuracy in certain fields of writing may be attained without knowledge of grammar, however taught," he still supports diagramming as a form of grammatical analysis which can indirectly be an aid to correct speech. Thus in response to Hook's objection to any formal classification of parts of speech, Wolfe explains:

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[79] Wolfe, *op. cit.*, p. 351.

[80] *We Teach English*, (New York: Harcourt, Brace and Co., 1951), p. 210.

[81] Wolfe, *op. cit.*, p. 351.

> . . . sooner or later the average boy or girl brought up in a home where correctness in pronouns is a precarious variability would like to be able to analyze his own sentences in split seconds to be sure he uses correct pronoun or verb form. As long as any such need exists, we shall have need for decomposing our own sentences as we speak.
>
> If a diagram, a chart, a cartoon, a comic book, or any other visualization can help us decompose a sentence instantly, it is timely and functional in helping us attain correct speech.[82]

And further:

> Does diagraming enable the pupil to analyze his own use of nominative and objective case as he speaks sentences? Does it help him to use the objective case after prepositions and transitive verbs? If so, it functions in a very vital way in terms of correctness in usage. Informal attacks on usage can eliminate many errors. They cannot, however, give the pupil that assurance that only a sound knowledge of grammar can give him when he wants to be correct.[83]

Wolfe's view is, then, that, although there exists no evidence to prove the point, diagramming, as an analytical device, is effective in teaching correct usage in speech when the pupil desires to be correct. (It is interesting to notice that Wolfe finds diagramming an effective device in relation to correct speech whereas Makey emphasized its usefulness in reading.)

The last section of Professor Wolfe's article deals directly with the merits and shortcomings of diagramming in terms of practical classroom application. As to the merits, Wolfe says, "In ideal classroom diagraming, the pupil will experience the pleasure of logical analysis; for diagraming, like geometry, requires clarity of premise, mastery of axioms, and logic of conclusion."[84] For teacher and pupils the use of diagraming has these specific values:

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[82] _Ibid._, p. 350.

[83] _Ibid._, p. 351.

> 1. The weaker the pupil, the greater the need for a visual aid. Diagraming offers at least some kind of a picture, a map, a chart of difficult language abstractions.
>
> 2. In a diagram the pupil thinks of each word in relation to the sentence. When the pupil diagrams "I fell down" and "The dog ran down the street," he has a chance to see how parts of speech change with functions.
>
> 3. The placing of each word in a diagram represents ideally a decision in terms of grammatical principle. Pupils should be encouraged to omit words rather than guess.
>
> 4. Boys and girls like this exactness of thought and the visual picture of each decision in relation to the sentence. Each decision is represented by a physical movement which is conducive to association.
>
> 5. Learning is cumulative. Each set of sentences to be diagramed may contain all the principles thus far represented.
>
> 6. For each sentence diagramed a pupil may be asked to write and diagram a sentence similar in structure and equally intense in diction.[85]

The shortcomings in diagramming have the following dangers and limitations:

1. There is the danger of allowing a pupil to proceed to more difficult work before he has mastered the fundamentals. (Wolfe recommends holding the entire class back, if necessary.)

2. If forced to diagram involved sentences of impossibly complex or idiomatic constructions, a pupil's self confidence may be shaken which

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[84] *Ibid.*, p. 352.

[85] *Ibid.*

will present a hazard to his progress. (Use of textbooks with simple constructions avoid this.)

3. There is a persistent danger that a pupil may lose his power of thoughtful and tentative decisions by lapsing into a guessing attitude. (To remedy this danger Wolfe recommends requiring ruled lines in pencil, written word in ink; putting a heavy penalty on wrong words but no penalty on omitted words; and requiring for each sentence diagrammed, a diagrammed sentence of the pupil's own invention.)[86]

At the conclusion of his article Wolfe recommends a procedure for teaching diagramming which he believes will make it "a satisfying means not only to correctness in speech, but also to the pupil's skill in exploring new riches of sentence structure." This procedure is recommended for a ninth grade class (the examples have been omitted):

1. Pupils diagram sentences containing only adjectives, nouns, and single-word verbs.

2. Pupils make up similar sentences.

3. Pupils diagram their own sentences.

4. Pupils diagram sentences with nouns, verbs, adjectives, and adverbs.

5. Pupils make up similar sentences with the same structure but different words.

6. Pupils diagram their own sentences.

7. Pupils vary the structure of their own sentences, shifting adverbs to various positions.

8. New problem: Diagraming prepositional phrases.

9. Pupils compose their own sentences with prepositional phrases, adjectives, adverbs, nouns, and single-word verbs.

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[86] *Ibid.*, p. 353.

10. Pupils diagram their own sentences.

11. Pupils manipulate their own sentences.[87]

Other writers have supported diagramming, if not as resourcefully, at least as optimistically as Professor Wolfe. Ralph Behrens and Eugene Nolte, teachers at an Arkansas college, assert, "Being fully aware of the danger of a sentence diagram as an end in itself, we nevertheless are convinced that the diagram presents to the student the clearest picture of the syntactical structure of a sentence."[88] Equal support for diagramming in the late fifties is given by the Sisters of Notre Dame in an article entitled "Grammatical Analysis"[89] and by Thomas D. Edwards in "The Grammatical Approach."[90] Writing in 1958, Katherine B. Peavy gives an account of a particularly effective lesson involving diagramming. She points out that, although diagramming is a "real aid in the better understanding of sentence structure and in clarifying parts of speech,"[91] it can also be a very dull part of studying grammar. To remedy this Miss Peavy employed dramatization in order to arouse and maintain interest. She brought a red tennis ball into her eighth grade classroom. On dropping the ball, "Ball bounced" was written on the board in diagrammatic form. From this basic sentence the lesson evolved. Adjectives were added describing the size, shape and color; adverbs, describing how the ball bounced; prepositional phrases, by holding the ball in various positions and telling where it was. When intransitive verbs were introduced, the red ball moved over to the predicate. Statements were made not involving action for complements. Later, clauses were added. Miss Peavy says of this lesson:

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[87] Ibid.

[88] Ralph Behrens and Eugene Nolte, "Linguistics and the Sentence Diagram," College English, XV (November, 1953), 126.

[89] Sisters of Notre Dame, "Grammatical Analysis," Catholic School Journal, LVII (November, 1957), 310.

[90] Thomas D. Edwards, "The Grammatical Approach," School and Community, VLIV (April, 1958), 20-21.

[91] Katherine B. Peavy, "Shall We Teach Diagraming?" The Instructor, LXVII (February, 1958), 108.

> The class enjoyed the step by step procedure and the discipline of working to a set plan. The red tennis ball had become almost alive, and it hardly seemed possible that so much could be said about it. When we went into a unit of creative writing, the children approached it with eager interest. Sentence structure offered far fewer problems, and writing became fun.[92] [It is interesting to note that Miss Peavy finds diagramming beneficial in the area of writing.]

In the sixties, B. R. Pollin, chairman of the English Department at the High School of Commerce in New York City, tells of the effectiveness of diagramming in reorganizing the entire English program of the school. Under the old program of the English curriculum no diagramming had been used. Pollin reports that "a deficiency existed in methods for dealing with the very weak writing and speaking skills of our students, most of whom come from strikingly underprivileged homes in mid-Manhattan."[93] To remedy the deficiency a new program was effected using mimeographed outlines of diagrams taken from a textbook last published in 1936. These materials, using the Reed and Kellogg system, emphasized (1) simple and compound sentences, (2) the complex sentence, and (3) verbals. Concerning the use of this material by the teachers, Mr. Pollin says that they found "visualizing the total pattern of the sentence, somewhat dissected through the perpendiculars to the base line, is immensely helpful to our students, many of whom have not been able to see, abstractly, the logical relationships of subject, verb and complement."[94]

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[92] Ibid., p. 109.

[93] B. R. Pollin, "Diagram for Progress," High Points, XLIII (March, 1961), 16.

In two months' time the chairman himself taught twenty-nine out of thirty-two pupils the fundamentals of diagramming. (He used only the equivalent of six full periods broken up into fifteen-minute units.) But in evaluating the program Pollin believes "the most encouraging results lay not in the 'pure' knowledge and ability, useful though that is, but in the concomitants of improvement in speech and writing."[95] In addition he felt "justified in attributing this growth largely to the visualization and the active vocabulary and activating concepts provided by the diagrams themselves,"[96] since the same method of composition instruction was used in the new program as had been in the old with the use of diagrams as the only variable. Concerning the value of diagramming itself, Pollin is enthusiastic. He concludes, "The method furnishes a ready means of structuring the high school curriculum in one area; it serves as a useful check on the understanding of fundamental principles; and, above all, it is a useful tool for showing errors in sentence structure and, in literary analysis, for calling attention to qualities of style in a fine piece of writing."[97]

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[94] Ibid., p. 20.

[95] Ibid., p. 21.

[96] Ibid., p. 22.

[97] Ibid., p. 24.

Not every article in the literature is as favorable to the use of diagramming as the preceding one. Edward L. Anderson's article, written for the Current English Committee of the National Council of Teachers of English and published in the Current English Forum section of Elementary English in 1953, is quite critical of diagrams. Anderson contends:

> No evidence exists to show that diagraming results in any improvement in a student's use of English. And small wonder, for a diagram of a sentence is not the sentence itself; a diagram is an abstraction from a sentence--an abstraction which cannot take into account all of the meanings that a sentence may express, all of the situations in speech or writing that gives these meanings. There is no real value in an analysis which lacks completeness. Physical scientists do not accept incomplete and fragmentary explanations of their phenomena. How is it justifiable for us who teach English to do so?"[98]

Anderson lists four specific criticisms of diagramming:

> 1. What appear to be sentences of quite clear and relatively simple meaning often prove to convey decidedly different meaning in different situations. [For example, Anderson points out that the sentence "The boy made a basket" would be diagrammed the same way regardless of meaning. He adds here: "What is more important about such a sentence--a blackboard picture of its separate words, or the possible meanings it can express?"]
>
> 2. Sentences whose "syntax" may appear very simple are sometimes analyzable in different ways, depending on what a speaker or writer intends and on what a listener or reader understands to be meant.
>
> 3. Sentences of clearly different meaning and different word order may result in identical diagrams. [In making this point, Anderson includes the following:
> "Professor Lou LaBrant offers an amusing example of this. She writes, 'Some old practices appear again

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[98] Edward L. Anderson, "Diagraming Sentences," Elementary English, XXX (February, 1953), 117.

> after they seem to have been thoroughly discredited. The evidence, for example, is strong for the conclusion that diagraming, once a popular form of mental gymnastics, is not helpful to writing nor to real understanding of grammar.[99] It is clear that frequently it greatly oversimplifies structure and distorts meaning. Take these two sentences for example: *The old man still sat on the wall*. *The old man sat still on the wall*. Diagramed, they are alike; read intelligently, they are not the same.' In diagraming 'still' would appear beneath the verb, 'sat' as an adverb, in both sentences. The diagram, inescapably the same for both sentences, ignores the different meanings which 'still' expresses in the two sentences."]
>
> 4. Diagraming is not consistent with the nature of language. We do not hear sentences in separate compartments, nor do we see them on slanting lines . . . We hear our language in a time sequence, marked by variations in pitch, tone, and rhythm. We do not, in ordinary reading, see sentences arranged in these peculiar ways. It would seem better to learn to analyze *what is important to analyze* in sentences by examining them as they come to us by ear or by eye.

In Anderson's last criticism he says, "We do not, in ordinary reading, see sentences arranged in these peculiar ways." This is a frequent criticism of Reed and Kellogg diagramming, i.e., the words do not appear in the order in which they naturally occur in a sentence. Gleason has pointed out, however, that "Reed and Kellogg is concerned with word relationships, not word order,"[100] and that this is not necessarily a shortcoming. It is interesting to compare Anderson's point of view here with Gleason's. Gleason believes, for example, that diagrams may be valuable precisely because they go behind order to exhibit structure which is only signaled by order. In English, for example, there are many pairs of sentences containing the same words in different orders. The sentences of Miss LaBrant's which Anderson gives in his third criticism are examples of this--The old man still sat on the wall. The old man sat still on the wall. For such sentences Gleason says that if these are alternative arrangements with the same structural relations, they are diagrammed alike. He uses the following sentences, however.

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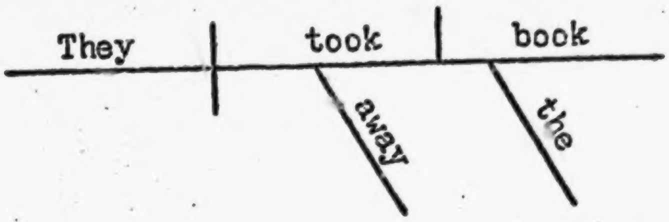
[99] Incidentally it is this last point of Prof. La Brant's which Wolfe strongly objects to.

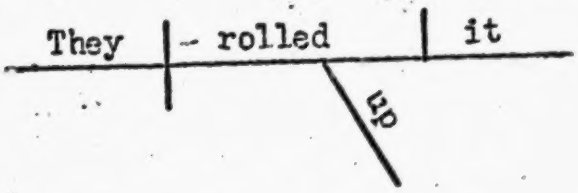
[100] Gleason, *op. cit.*, p. 143.

They took the book away.
They took away the book.

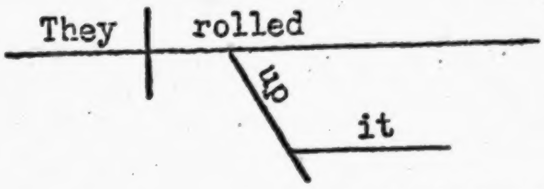


Gleason, then, says that the diagrams are different when there is a difference of structural relations, as in:

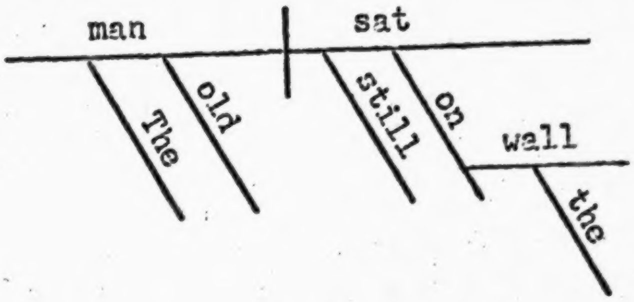
They rolled it up.



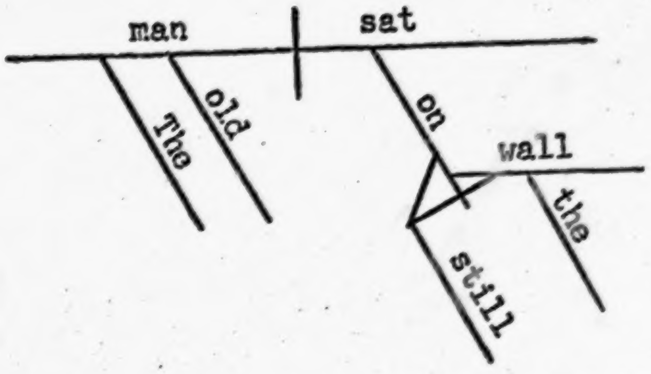
They rolled up it.



Anderson, on the other hand, says that sentences like those immediately above (i.e., sentences of clearly different meanings and different word order), may result in identical diagrams. Miss LaBrant's diagram would thus appear:



The writer would like to show that in this case two diagrams could be used showing the difference in meaning and structure. For The old man sat still on the wall. the diagram above would serve. But for The old man still sat on the wall. the following could be used:



The distinction in the two is, of course, that in the first case the adverb modifies only the verb whereas in the second it modifies the prepositional phrase used as an adverb and is, therefore, an example of an adverb modifying another adverb. Therefore, although such sentences as these can result in identical diagrams, they do not necessarily have to.

Anderson and Gleason differ also on another point. Anderson's first criticism of diagramming is that "what appear to be sentences of quite clear and relatively simple meaning often prove to convey decidedly different meanings in different situations." In other words, sentences are often ambiguous. True, as far as He made a basket. is concerned, only context could determine the correct meaning. This Anderson points out in criticism two. However, the writer would like to point out that it is the ambiguity of the word basket that gives the difficulty, not the order of the words themselves. It is not the structure of the word with which a diagram deals but the structure of the sentence. Gleason, differing from Anderson, believes that diagrams provide a means of exhibiting structural ambiguity. If a sentence is ambiguous, that is, when one sequence of words has two or more possible analyses, there are two or more diagrams to indicate the possible structure:[101]

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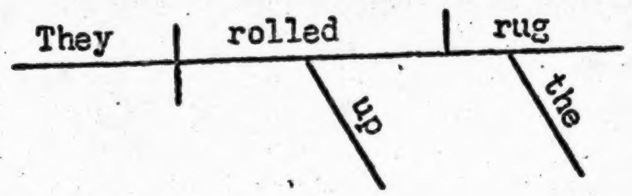
[101] Gleason, op. cit., p. 144.

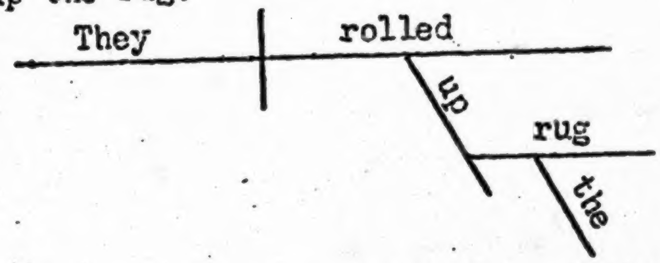
(They wanted to dance so . . .)

They rolled up the rug.



(He spilled the marbles, and . . .)

They rolled up the rug.



By pointing out grammatical equivalence, or the lack of it, and providing a means of exhibiting ambiguity, the Reed and Kellogg diagram has, in Gleason's opinion, inherent possibilities for classroom application in the teaching of composition. It could, for example, be utilized by teachers in discussing style. Nevertheless, teachers who use Reed and Kellogg diagramming either do nothing with style or else talk about style completely independently from the work on grammar.[102] (Gleason is mentioned here because he suggests specific use of the Reed and Kellogg system in the teaching of composition whereas most of the other authors related it to reading or correct usage.)

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[102] Gleason letter, Appendix I.

CHAPTER V

FINDINGS FROM THE SURVEY

In July of 1966, a questionnaire was mailed to the English curriculum directors in the state departments of education of all states in the United States which had that office.[103] For states not having English curriculum directors, the questionnaire was sent to the state superintendent of education instead. In this way all fifty states received questionnaires. At the same time similar questionnaires were sent to the city supervisors of English of the fifteen largest cities in the United States according to the 1960 census. Accompanying each questionnaire was a letter of explanation and an enclosure which illustrated the type of diagrams referred to on the questionnaire. The names of the English curriculum directors and state superintendents of education, and the address used for all city supervisors of English are included in Appendix II to the present study. The explanatory letter, two questionnaires (one sent to the states, the other to the cities), and illustrated enclosure of diagrams are reproduced in Appendix III.

In September, 1966, follow-up letters were sent to those states from which responses had not been received. This letter was accompanied by another copy of the original questionnaire, explanatory letter and diagram enclosure. In November, 1966, identical follow-up letters and enclosures were sent to the cities from which responses had not been received. A copy of the follow-up letter appears in Appendix III.

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[103] Names and addresses were obtained from the National Council of Teachers of English. See Appendix I for letter and reply.

Beginning September 23, 1966, the writer began correspondence with persons recommended by respondents to the questionnaire. The purpose of this correspondence was to obtain additional current opinion on and information about classroom practices concerning diagramming. The names of the correspondents and a copy of the letter sent are included as Appendix IV. The responses are included as Appendix V.

From the fifty states sent the original questionnaire, forty-seven replies were received (94.0% response). Of these, thirty-six worked with and returned the questionnaire, sometimes with an accompanying letter (see Appendix VII). Eleven sent only explanatory letters. Ten of these letters are included as Appendix VI. (One respondent requested that his reply be kept confidential.) Three states did not respond to the questionnaire; these were Illinois, Tennessee, and West Virginia.

From the fifteen cities, ten replies, one with an accompanying letter, were received (66.7% response). The accompanying letter is included in Appendix VII. Cities not responding to the questionnaire were: Los Angeles, California; San Francisco, California; Cleveland, Ohio; Boston, Massachusetts; and Dallas, Texas.

Since only thirty-six states completed the questionnaire, the following compilation of answers represents a 72.0% response from the states. Similarly the ten cities responding to the questionnaire represent a 66.7% response. The numbers represent a tabulation of the items checked by the respondents.

In response to the question, "Judging by your approved textbook list and/or your own personal observation, classify the extent of the use of the Reed and Kellogg method of diagramming . . .," the following responses were received:

TABLE 1

USE OF REED AND KELLOGG

	Not Used	Seldom Used	Commonly Used	Widely Used	Almost Universally Used	Omitted Question	Totals
States	1	7	20	5	2	1	36
Cities	0	6	3	0	1	0	10

Thus in the view of the responding states, and disregarding one state which omitted the question, the Reed and Kellogg system was almost universally or widely used in 20.0% of the states, commonly used in 57.1% of the states, and seldom used or not used at all in 22.9% of the states. Of the ten cities responding to the question, 10.0% almost universally or widely used the Reed and Kellogg system, 30.0% answered "commonly used", and the remaining 60.0% seldom used the system.

To the question, "In your opinion, at which level is the Reed and Kellogg method most used," the following response was given. (To this question there was duplication in response; i.e., two states checked all three levels and ten states checked two levels--making a total of fourteen duplications. Two cities checked two levels--making a total of two duplications. In all duplications the levels checked were junior high and secondary combinations.)

TABLE 2

LEVEL OF USAGE OF REED AND KELLOGG

	Elementary	Junior High	Secondary	Omitted Question	Total Response	Minus Duplication	Totals
States	3	29	15	3	50	14	36
Cities	3	1	3	5	12	2	10

As Table 2 indicates, there was a certain amount of duplication of answers, so percentages will be given two ways: on the basis of cases involved (either states or cities) and on the basis of total response. Both sets of figures will disregard the respondents that omitted the question.

TABLE 2a

% RESPONSE

	Elementary	Junior High	Secondary	Totals
Total (states)	9.1	87.9	45.5	*
Cases (cities)	60.0	20.0	60.0	*
Total (states)	6.4	61.8	31.8	100.0
Response (cities)	42.8	14.4	42.8	100.0

*The total percentages are not given--because of duplication they are in excess of 100.0%.

Comments[104] on the Reed and Kellogg system came from three cities and five states: (All numbering of comments is, of course, by the present writer.)

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[104] Comments on any question in the questionnaire are not necessarily those of the person to whom the form was sent, as the respondents were free to refer the questionnaire to another person if they so desired.

1. Reed and Kellogg method is used in textbooks under adoption at the present time (Milwaukee)

2. Our textbooks contain diagramming, but we leave its use to the teacher. (St. Louis)

3. Where it is used it is used sporadically. (Detroit)

4. Commonly used by teachers so trained--scoffed at by others. (North Dakota)

5. Some teachers might use it. (Michigan)

6. Do not use. (South Dakota)

7. This type of diagramming is used--but diagramming is waning. (Iowa)

8. Seldom used after Grade 9. (Vermont)

Concerning the balloon diagram (cf.1851), no respondents knew of any teachers or schools that used this method or any earlier methods. Only two states omitted the question; no cities omitted it. The only comment received was--"I was born sixty years too late for this one." Two states, however, indicated they had information available for teachers on the balloon diagram: Delaware and New Mexico. The writer was unsuccessful in an attempt to obtain samples. Only Delaware responded to the request (see Appendix VIII) saying, "This is to inform you that the only thing we have available as a sample of balloon diagrams is a large 'homemade' chart used in a previous inservice program."

In response to the question, "Judging by your approved English textbook list and/or your own personal observation, classify the extent of the use of the newer (i.e., linguistic) methods of diagramming . . .," answers were as follows:

TABLE 3

USE OF LINGUISTIC METHODS

	Not Used	Seldom Used	Commonly Used	Widely Used	Almost Universally Used	Omitted Question	Totals
States	5	24	1	1	0	5	36
Cities	4	6	0	0	0	0	10

Disregarding the cases that omitted the question, 3.2% of the states have wide usage of the linguistic method, 3.2% of the states declared common usage, 77.4% of the states and 60.0% of the cities seldom used this method, and in 16.2% of the states and 40.0% of the cities this method was not used at all.

In classifying the level at which the linguistic methods of diagramming were used, the following response was obtained. (Duplication to this question consisted of one state checking elementary and junior high and three states checking junior high and senior high--making a total of four duplications. Only one city duplicated a response by checking junior high and secondary--total: one.)

TABLE 4

LEVEL OF USAGE OF LINGUISTIC METHODS

	Elementary	Junior High	Secondary	Omitted Question	Total Response	Minus Duplication	Totals
States	1	8	17	14	40	4	36
Cities	0	1	3	7	11	1	10

Percentages will be given both on the basis of cases involved (either states or cities) and on the basis of total response. Both sets of figures will disregard the respondents that omitted the question.

TABLE 4a

% RESPONSE

	Elementary	Junior High	Secondary	Totals
Total (states)	4.5	36.1	77.3	*
Cases (cities)	0	10.0	100.0	*
Total (states)	3.8	30.8	65.4	100.0
Response (cities)	0	25.0	75.0	100.0

*The total percentages are not given--because of duplication they are in excess of 100.0%.

Two cities and ten states had the following comments concerning the use of linguistic methods or linguistic diagrams:

1. Only casually to illustrate a point. [Houston]
2. The linguistic methods have not been used. [Washington, D. C.]
3. We are moving toward linguistic approaches. [Nevada]
4. There is not enough of a widespread use of new texts to make a statement [i.e., linguistic texts]. [Michigan]
5. Roberts' earlier books, Patterns of English and English Sentences, are responsible for this high school attention [checked seldom used]. [Colorado]
6. [used at junior and secondary levels] if at all. [Ohio]
7. [concerning level of usage] hard to say--by individual teachers only--ones who has [sic] recently had courses stressing linguistics. [Alaska]

8. Some of our teachers are using structural and transformational but I have observed only a few cases when diagrams were used. (Iowa)

9. (not used) to date. (Hawaii)

10. I think those using linguistic approaches mark sentences instead of diagramming. (Kansas)

11. Only observed use in 3 junior high schools. (Vermont)

12. The use of the "newer" methods of diagramming has been very limited, because mainly of the lack of both training and understanding. (South Carolina)

In addition, the state of Indiana reports ninety-three schools currently using or experimenting with linguistics and seventy-three with transformational grammar. These figures were obtained as a result of a survey directed by Miss Toni Sue Ax, State English Supervisor, Indianapolis, Indiana of the Indiana State Department of Education in October of 1965.

In answer to the question, "Are there any books included on your adopted textbook list which contain any of the newer methods of diagramming," the answers were distributed as follows:

TABLE 5

BOOKS ON ADOPTED TEXTBOOK LIST CONTAINING LINGUISTIC DIAGRAMS

	Yes	No	No Adopted Textbook List	Omitted Question	Totals
tates	9	12	10	5	36
ities	3	7	0	0	10

sregarding those cases that omitted the question, 42.9% of the states at have an adopted textbook list include texts containing linguistic diagrams and the remaining 57.1% of the state lists included no such books. None of the cities used an adopted textbook list, but 30.0% of them made such texts available, while the remaining 70.0% did not.

The question tabulated above also asked which method of diagramming was most often found in linguistic texts. To this only two responses were received:

1. box--tree diagram of transformational Generative Grammar (Georgia)

2. immediate constituent; also the "diagrams" suggested by the Texas Transparency Project materials Masterbooks sold by L. L. Ridgway, Houston, Texas. (Texas) (See Appendix VIII)

Further comments concerning the use of linguistic texts were:

1. Texts are being adopted in 1966. Some of the texts contain newer methods. (Idaho)

2. A separate screening committee handles and lists textbooks. (Kansas)

3. Enjoying English series is in adoption and recommends transformational and generative grammar diagrams . . . (Louisiana)

4. The Michigan Council is interested in Linguistics and in modern teaching about language. The movement is slow but this year there are several fine texts available. (Michigan)

5. Using the revised Harper-Row Building Better English, although the newly revised books are not yet on the adopted list. Some of the newer approaches to diagramming are found in this series in the brief chapters on transformational grammar, etc. (in which diagramming is involved and, no doubt, taught to some extent). (South Carolina)

6. Individual teachers are using them (i.e., linguistic diagrams) with some classes. (Baltimore)

7. We list 713 titles for use in Grades K-8. (New York City)

Linguistic texts most frequently mentioned include the following:

Modern English Sentence Structure, Syrell Rogoven

Patterns of English, Paul Roberts

Syntax, Paul Roberts

Enjoying English (series; 7-12), Singer, publisher

Building Better English (revised), Harper-Row, publisher

Grammar Usage and Style, McGraw-Hill, publisher

Transformational Grammar and the Teacher of English, Owen Thomas

Additional information of special interest was obtained in response to the question concerning linguistic textbooks. Leo J. Steinlein, Assistant Administrative Director in the Office of Textbooks and Supplies in New York City, describes a comprehensive textbook sample library:

> You understand, I am sure, in a school system such as ours, which follows an "open-list" policy rather than a limited local adoption system, it is virtually impossible to make any brief statement concerning such a specific instructional practice as you are studying. Our list of approved textbooks, for example, includes over 700 items for use in English Composition for grades K-8. You would probably find this list encompasses all of the titles recorded in all of the responses to your questionnaire from all other school systems, plus other titles.
>
> We are happy to invite you . . . to make use of our textbook sample library for your research.[105]

The existence of such a library and list could be, of course, valuable to students interested in textbook research or teachers in selecting suitable books for their students.

To the question, "Do you know of any special projects, research, or school in-service training programs . . . that include any of the methods of diagramming," there were fourteen answers from the thirty-six states responding and two answers from the ten cities. Comments mentioning these projects or attitudes toward them were:

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[105] See Appendix VII for contents of entire letter.

1. Wisconsin English Language Arts Curriculum Project (USOE), Dr. Robert C. Pooley, Director - Study sheets reproduced monthly for distribution to every Milwaukee secondary English teacher. (Milwaukee) (In this connection, it is interesting to note Dr. Pooley's response to the traditional and IC diagrams; see Appendix V for this comment.)

2. We are holding a 3 weeks in-service program in linguistics. (Baltimore)

3. In service study may include diagramming if the local teachers choose to consider it. (Kansas)

4. Tree diagram, UVM Summer NDEA English Institute; Saw U. of Vermont Summer program and observed tree diagramming. (Vermont)

5. Coos Bay - Also Aermiston--(Write Dr. Freeman Anderson, Portland State College on this)--Schools in Eugene, Salem, Coos Bay, Beaverton, Lake Oswego, Springfield, Oregon; Seattle, Washington--who are the pilot schools for the transformational grammar being written into the language arts curriculum being developed at the University of Oregon, Eugene, Oregon:
Cooperative Research Project No. H-149
Contract No. OE-5-10-319
Title: A Sequential Curriculum in Language, Reading, and Composition (Oral and Written, Grades 7 through 12)
Director: Albert R. Kitzhaber[106] (Oregon)

6. Diagramming is not being stressed--concepts are. (Iowa)

7. Much workshop activity (and curiosity) regarding str. ling. & trans. grammar. (Ohio)

8. Under the auspices of Project English no. 1987 I introduced a system of diagramming which synthesized certain IC as well as transformational techniques. A copy of the government report is usually available in major state libraries. About 100 teachers in Colo. have been exposed to this system. (Leonard Landry, Consultant English, Colorado)

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[106] Dr. Kitzhaber was kind enough to send the writer a sample of the volumes of the grammar developed at the Curriculum Study Center. The kind of diagram employed is the transformational tree or branching diagram of the type fairly standard in books on transformational grammar. (See Appendix V for Dr. Kitzhaber's letter.)

9. There are many schools where teachers are trying linguistic approaches. The University of Michigan, Michigan State University, Wayne State, Western Michigan all have linguistics departments. This would be difficult to pin down without a statewide questionnaire. However many teachers and schools use whatever system is in their textbooks. [Michigan]

10. Sometimes as a by product of the linguistics approach. [Nevada]

11. In-Service Programs introducing linguistics. Described in Classroom Practices (NCTE) 65-66. [Texas]

12. NDEA Title XI Institute Penn State U. [Pennsylvania]

13. Wisconsin English-Lang. Arts Project-trans-trees used to a small extent as a visual aid. No drill or exercises in it. [Wisconsin]

14. Inservice course - Little Rock Public Schools, Transformational Grammar [Arkansas]

15. NDEA Institute at University of Nebraska and Hasting College. [Nebraska]

16. NDEA Institute at U. of Utah--Wm Slager used material on diagramming. [Utah]

17. Previous to my present position, I served as supervisor of reading and English in the Greenville Schools (S. C.). While there, efforts were made to develop more understanding among the teachers of the so-called "newer" approaches to English instruction, including diagramming. A project with the assistance of the NCTE, was initiated in one junior high and one senior high school in order to conduct some action research in newer approaches. The junior high project proved more successful than did the senior high. [South Carolina]

The respondents were also asked, "Does your office have materials on diagramming available for teachers on request?" Answers were:

TABLE 6

DIAGRAMMING SAMPLES AVAILABLE

	Yes	No	Omitted Question	Totals
States	8	26	2	36
Cities	1	9	0	10

Disregarding the cases that omitted the question, 23.5% of the states and 10.0% of the cities provide diagramming samples, while 76.5% of the states and 90.0% of the cities did not.

If respondents checked yes to the preceding question, they were then asked which type of diagram was available for teachers on request. Of the nine checking yes there was frequent duplication, as those states or cities had samples of several different kinds of diagrams. Thus from nine responses, twenty-eight tabulation marks were obtained because of this duplication. The following table disregards duplication and indicates the twenty-eight responses. In addition, because of possible ambiguity on the questionnaire under the category of tree diagrams (i.e., whether transformational tree or IC tree was not specified), the category of "tree diagrams" will have to be interpreted as meaning either transformational or IC. Two respondents wrote in "transformational." These are included in this tree category. Also note that in this table states and cities are not differentiated.[107]

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[107] Only one city, Washington, D. C., indicated having samples on request (Reed and Kellogg only).

TABLE 7

TYPES OF DIAGRAMS AVAILABLE

	Reed and Kellogg	Tree	Chinese Box	Balloon	Total
Combined States and Cities Response	8	10	6	4	28

Of the 28 total responses, 28.6% cite the traditional Reed and Kellogg method, 35.7% the tree diagram, 21.4% the Chinese box, and 14.3% the balloon diagram.

In answer to "Does your office have diagramming materials available and if so, what type?" the following brief remarks were made:

1. All types--but I consider it a waste of time--except for superior students who are interested in analysis. (Oregon)
2. Textbook materials only. (Ohio)
3. Project English No. 1987 (diagrams). (Colorado)
4. We do not encourage diagramming. (Nevada)

In order to determine how willing states and cities were to have information provided by an outside agent and to determine the extent of their interest in the specific area of diagramming, the question was asked, "If you do not have such information available, would you like to have it provided through a central agency, such as the National Council of Teachers of English or the U. S. Office of Education?" The following table represents the response:

TABLE 8

DESIRE TO HAVE INFORMATION PROVIDED BY A CENTRAL AGENT

	Yes	No	Omitted Question	Totals
States	17	10	9	26
Cities	4	3	3	10

Disregarding those cases that omitted the question, 63.0% of the states and 57.9% of the cities indicated that they would like to have a central agent provide such information, while 37.0% of the states and 42.9% of the cities desired no such agent.

In indicating which agency was preferable as a source of information, the National Council of Teachers of English (NCTE) or the United States Office of Education (USOE), state response was sparse. Twenty-two states omitted the question; ten checked the NCTE; one checked the USOE; and three checked both--making total preferences for the NCTE thirteen and for the USOE, four. Six of the cities omitted the question; two checked NCTE; none checked USOE as a single source; and two checked both--making total preferences for the NCTE four and for the USOE, two.

Reactions to having information provided through a central agency and which specific one was preferable were expressed as follows:

1. Entirely too much time is spent in the misuse of diagramming. We try to de-emphasize diagramming. (New Orleans)

2. Although we are not convinced of the value of diagramming, we would be interested in examining any such information. (Baltimore)

3. On the basis of current knowledge about diagramming we do not give this topic high priority. (New York City)

4. Information upon request, yes, but nothing that moves toward a national curriculum. (Kansas)

5. Less emphasis is being placed upon diagramming and more on student writing. Revision is often handled by using the opaque or overhead projector. (Iowa)

6. Makes no difference (i.e., NCTE or USOE as agent) so long as it is good material. (Alaska)

7. Either, both (i.e., NCTE or USOE as agent). (Arizona)

8. This office relies on the textbooks of the major companies to disseminate current structural & transformational as well as conventional systems of diagramming. In addition, special workshops are held treating the materials of Project English No. 1987. (Colorado)

9. Teachers need a broad background of knowledge about language in place of "gimmicks." (Michigan)

In order to determine current opinion on the status of diagramming in the public schools, the writer included space for comments in connection with each question on the questionnaire. Some of these comments reflected personal opinion on as well as professional policy toward diagramming. Similarly, letters accompanying the questionnaire contained specific comments which revealed present attitudes toward diagramming. It is hoped that the following excerpts will give the reader an opportunity to compare widely held opinions about the status of diagramming in the public schools to what that status actually is according to educational leaders in various states and cities.

St. Louis, Missouri

> (quotation from our K-12 curriculum guide for English) The reader will . . . note the omission of anything concerning the diagramming of sentences. The reason for this is that diagramming is not a skill to be taught for its own sake and has no value if it does not help pupils understand sentence structure. Teachers are heartily encouraged to use diagramming as they would any visual

device, but diagramming as a skill is not included in the tests. The knowledge of sentence structure which pupils acquire--some of it with the aid of diagramming, it is hoped--will be tested without the use of diagrams. Pupils who know how to diagram sentences but cannot pass such tests obviously have not profited by their proficiency in drawing lines and setting words upon them. (Philip Enzinger, Supervisor Division of Curriculum and Educational Research, St. Louis Public Schools)

New Orleans, Louisiana

Entirely too much time is spent in the misuse of diagramming. We try to de-emphasize diagramming. (E. H. Friedrick, Director of Curriculum Service)

Milwaukee, Wisconsin

This excerpt is from the English Language Arts Guide that is given to all teachers of secondary English:
"If diagraming is employed, use it as a visual aid to help students understand the essential elements of a sentence, not to picture the complexities of sentence form. A student should not be tested on his ability to diagram sentences but on his ability to write sentences." (Hazel A. Thomas, Coordinator-Secondary English Language Arts)

Texas

Diagramming is a tool to be used by the discriminating teacher to support whatever kind of grammar she is teaching. Our philosophy is that the English teacher will need to acquaint the student with several theories of grammar before he is truly "liberally educated," and diagramming may assist in such instruction. We discourage any use of diagrams which do not promote understanding. (Dorothy Davidson, Program Director for English, Division of Curriculum Development, Texas Education Agency, Austin, Texas)

Connecticut (excerpt from letter)

Connecticut's State Department of Education promotes any methods, devices, or materials that give promise of developing more accurate understanding of language by students. When diagraming is used for this purpose--

not as an end in itself--and when it is used in conjunction with other methods--not as the only way of developing this understanding, teachers are encouraged in its use. (Robert Farrar Kinder, English and Reading Consultant, State Department of Education, Hartford, Connecticut)

New York

On the basis of rather wide-spread supervisory visits, may I safely conclude that a teacher uses diagraming to classify a syntactical relationship. However, this is a means to an end, and I doubt whether most teachers consider it desirous in and of itself. (Walter Eddington, Chief, Bureau of English Education, The State Education Department, Albany, New York)

Ohio (excerpt from letter)

Although the traditional system is generally considered "old hat" by younger teachers, many of the older ones do use it and most of the textbooks adopted throughout the State do include it--in varying amounts, of course. Personally, I feel sure that the linguistic "tree" and "box" diagrams will be used more and more in the future as Fries, Roberts, Postman, and Owen Thomas continue to influence teachers, methodology, and curriculum throughout Ohio. (V. B. Wootton, Education Consultant, English, Title III, NDEA, State Department of Education, Columbus, Ohio)

Michigan

Diagramming seems to me to be a tool which teachers might use to make abstractions concrete. I think there is a great danger in using it as busywork or as an end in itself. (Mildred E. Webster, Executive Secretary, Michigan Council of Teachers of English)

Wisconsin (excerpt from letter)

Our Wisc. English Lang. Arts Project is developing a curriculum guide on the teaching of language, which adopts a modified type of transformational grammar. Some "tree" diagramming is used in it, but not recommended for extensive use (mainly in jr. hi.). (Chester A. Pingry, English and Reading Specialist, Department of Public Instruction, Madison, Wisconsin)

Washington

> I am sure many teachers in the state use diagramming to explain sentence structure and I am sure many teach diagramming as an end in itself. Such practices have been observed in upper elementary, junior high, and senior high classrooms. My guess is that the majority of diagramming is of the Reed and Kellogg method. (Thomas L. Barton, Supervisor of English Language Arts, Olympia, Washington)

Kansas

> Use of any diagramming at all is left entirely to local schools. We recommend only that it be a means & not an end when used. (Lois Caffyn, English Language Arts Consultant, State Department of Public Instruction, Topeka, Kansas)

As mentioned earlier in this Chapter (page 61), the writer corresponded with persons recommended by respondents to the questionnaire. The purpose of this correspondence was to obtain additional current opinion on diagramming as well as specific classroom practices. The majority of these responses, however, gave only additional opinion. Further, many of the persons recommended were teachers on the college level, and one reference was to a military academy. The following comments, therefore, are not restricted to the opinions of public school educators.

Florida

> My personal opinion of some years standing is that anything but the slightest use of diagramming is of little value to the general language arts teacher. I question whether our job is to teach children a system of language analysis that would have the net effect of making them little, conscious grammarians. Certainly they can learn about their language as well as how to handle it effectively without learning a "system." But then I am open minded. (Arthur S. Healey, Supervisor, Language Arts, The Board of Public Instruction of Broward County, Florida, Fort Lauderdale, Florida)

Nebraska

I don't believe any kind of diagraming is likely to improve composition with one exception. Francis Christensen, U. S. C. [University of Southern California], shows how the immediate constituent diagram can teach students how to compose more sophisticated sentence patterns. (Frank M. Rice, Nebraska Curriculum Development Center, The University of Nebraska, Lincoln, Nebraska)

Florida

. . . for the most part I consider diagramming much like chess--an interesting intellectual exercise with no conceivable relationship to language. (Charles Isom, Coordinator of Language Arts, Hillsborough County Public Schools, Tampa, Florida)

Nebraska

Let me say first that I feel that virtually any type of diagramming can be helpful in revealing the structure of English sentences to high school students. Chinese box diagrams, of course, are superior to traditional ones in that they reveal constituent structure.

I find it interesting that you make no mention of the transformational grammarian's "branching tree" diagram, probably the most effective method of all. (Dwayne S. Strasheim, Instructor in English (Linguistics), Hastings College, Hastings, Nebraska)

Texas

When it [diagramming] is used, it serves merely as an additional tool for teaching.

As we move toward a linguistic orientation for our English program, more and more teachers are using a tree diagram much like that found in Paul Robert's [sic] books. (Verna Harrison, Consultant in Secondary English, Division of Program Development, Texas Education Agency, Austin, Texas)

Indiana

Those who use any diagramming in our system do not spend long hours of teaching or demonstrating it; they use it only as a method to get at a difficult analysis of a construction for those who cannot reason abstractly quickly.

I see many teachers use the traditional diagram very successfully in helping some pupils understand the function of a word within a construction; otherwise we do not use it at all. If a learner can understand the use of a word or its function within a construction, what then is the point to any picture that will show him what he already comprehends without it. (Malcolm M. Julian, Language Arts Supervisor, 7-12, Muncie Community Schools, Muncie, Indiana)

Indiana

In general, we in the English Department at Culver Military Academy do not feel that diagraming has much value in revealing or describing the English language to high school students. Occasionally the teacher may use a diagram to clarify certain relationships within the sentence, but for the student to spend his time diagraming is a waste of time and effort. The obvious reason--one has to understand the grammatical structure of the sentence before he can diagram it--hence there can be only a minimal reinforcing value to the procedure. Second, the student has to learn the details of whatever system of diagraming he's confronted with, and having learned it, he has acquired a kind of skill of no real value. And if he has trouble learning the details of diagraming, he's faced with just one more obstacle to making progress with the language.

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At CMA we teach transformational grammar, but we do not emphasize diagraming beyond a very minimal degree. (Elmer G. White, English Department, Culver Military Academy, Culver, Indiana)

The special enclosure illustrating types of diagrams (Appendix III), sent out with the original questionnaire was also sent to persons recommended by the respondents. The following comments were added to these enclosures and, therefore, have occasional references to the diagrams illustrated. Illustration one was the Reed and Kellogg diagram; two, the balloon diagram; three, the tree diagram (linguistic); and four, the Chinese box diagram (linguistic).

Florida

I personally use 3 & 4. Most of the teachers in the county use 1 (who use any at all). I have never seen anyone use #2. (Charles Isom, Coordinator of Language Arts, Hillsborough County Public Schools, Tampa, Florida)

Maine

I tried Eng. Snytax (which includes the transformational branching diagram) last year with two "low" college divisions, grade 12. The diagramming showing every level of abstraction makes more sense than many of the techniques listed above. (John Smith, Brunswick High School, Brunswick, Maine)

Wisconsin

I regret that I find no value or significance in this kind of analysis and therefore have no comments. (Prof. Robert C. Pooley, Wisconsin English Language Arts Curriculum Project, University of Wisconsin, Madison, Wisconsin)

Arkansas (a free hand illustration of branching tree appears first)

This is the type of diagramming we use to some degree in the schools of Little Rock, Arkansas. I feel that diagramming is helpful as a visual aid; however, I do not feel that very much time should be spent on it. (Josephine Feicock, Supervisor of English, Little Rock Public School System, Little Rock, Arkansas)

Florida

We do not emphasize traditional diagram practices in our English language arts program in Orange County. Individual teachers of course employ diagramming from time to time for special reasons and purposes.

The direction of our thinking is toward transformational grammar. We shall be encouraging "diagrams" appropriate to this kind of program. (Mrs. Bernice Hoyle, Curriculum Assistant in English, Orange County, Florida)

CHAPTER VI

SUMMARY AND CONCLUSIONS

Summary

Three different approaches to evaluation were made in the course of this study:

1. the literature concerning the various types of diagrams.
2. a questionnaire sent to fifty states and fifteen largest cities.
3. personal correspondence with educational administrators and teachers.

From these sources the writer sought to determine the following:

1. the present status of diagramming in the public schools throughout the United States.
2. the types of diagrams being used.
3. the merits and shortcomings of the various types of diagrams.
4. expert opinions concerning the effectiveness of diagrams as a teaching device.
5. the resources available to teachers for securing information on diagramming.
6. the extent to which more information on diagramming is desired, and from what source such information is preferred.

Since the study was limited to the opinions of the persons contacted and the opinions of the writers in the literature, the findings are, of course, subjective and suggestive rather than conclusive. In addition, any generalizations drawn from the questionnaire must be limited by the fact that 6.0% of the states and 33.3% of the cities did not respond; therefore, 94.0% of state response is represented and only 66.7% of the cities.

Conclusions

If the opinion of the respondents is considered representative and the above mentioned limitations in response are taken into consideration, the following conclusions can be drawn from the study:

1. The Reed and Kellogg diagram is used in varying degrees in every state and city responding to the questionnaire. The majority of the responding states use the Reed and Kellogg method to an extent that could be considered at least "common" or "wide." Only a minority of the responding cities use the Reed and Kellogg diagram to this extent.

The Reed and Kellogg method is used at the junior high school level by a great majority of the responding states. But only a small minority of the responding cities use the method at this level. Use of the Reed and Kellogg method by the cities was divided equally between the elementary and secondary levels.

Overall, linguistic methods of diagramming are seldom used by responding states and cities. Nearly half of the cities responding used no linguistic diagrams at all. Of the states using linguistic diagrams, three-quarters are using them at the secondary level. All of the responding cities use them at this level. Many comments made by respondents, however, indicate that interest in the Reed and Kellogg method is waning, while interest in linguistic methods is increasing.

In-service training programs, special studies made by universities and colleges, NDEA institutes, and curriculum programs under Project English include linguistic diagrams in their programs of instruction or experimentation. Textbooks are including linguistic materials more and more.

2. The types of diagrams used throughout the states and cities according to the survey include:

(a) the Reed and Kellogg diagram

(b) the IC tree diagram or a variation (e.g., the IC branching diagram)

(c) the transformational tree or a variation

The survey disclosed no use of the balloon diagram or earlier forms, nor use of the slot-and-filler diagram.[108]

3. The merits and shortcomings of the types of diagram as revealed in the literature included in the study are presented in detail in Chapters II, III, and IV. Any generalizations on merits and shortcomings are, of course, value judgments which depend upon the situation in which and purpose for which a diagram is used. With respect to diagrams in the public schools the following generalizations could be made:

Reed and Kellogg diagram

Merits - By a rearrangement of words, the diagram illustrates the logical (i.e., meaning-based) relationship of the structure of the sentence. Properly used, this diagram can illustrate grammatical equivalence, or the lack of it, as well as provide a means of exhibiting ambiguity.

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[108] Although no respondents knew of any teachers using balloon diagrams, some of them indicated they had samples of such diagrams available.

Shortcomings - Because of lack of agreement in conventions in various texts, and in some texts difficulty in maintaining the internal consistency of the method, this diagram is not very effective in showing the structure of compound and complex sentences.

Balloon diagram

No material was found on an evaluation of this type of diagram. Because, however, the balloon diagram is an earlier and somewhat similar version that led to the Reed and Kellogg diagram, the writer assumes that a similar evaluation applies.

IC tree diagram

Merits - This diagram retains and reveals the sentence's syntactic structure by leaving the words in the order in which they appear in the sentence. It also has the advantage of the branching tree in that it can be interpreted in only one way. In IC tree form this diagram is, in particular, simple and easy to draw.

Shortcomings - The rigidly dichotomous procedure on which this diagram is based necessitates a complicated cutting procedure involving decisions as to the order of cuts or of making cuts.

Slot-and-filler diagram

Merits - This diagram has the same advantages as the IC tree and, in addition, can be more explicitly labeled. It also avoids the decisions of cutting.

Shortcomings - Greater complexity is involved in the explicit labeling of the diagram. The labeling of each slot accompanies the analysis.

Chinese box diagram

Merits - Like the IC tree, this diagram leaves the words in the order in which they appear in the sentence. The unique value of this diagram, however, is that it illustrates the notion of constructions being nested within constructions.

Shortcomings - The Chinese box is difficult to draw neatly and when complex is hard to interpret.

Transformational-tree diagram

Merits - Because of the unique approach to grammar by the transformationalists, this diagram reveals the deep structure of a sentence rather than surface structure. It is the most explicit of the diagrams discussed and can be interpreted in only one way.

Shortcomings - Because of its explicitness, the transformational diagram is extremely complex and may seem strange and difficult to the beginner. The quasi-algebraic notations involved in the rules from which the diagram is formed may prove an additional difficulty.

4. A survey of the research on diagramming seems to indicate it is not an effective teaching device in connection with the skills of reading, writing, usage or punctuation. Most prescriptive writers in the field, however, advocate its use for one or all of these purposes. Other writers contend the value of diagramming lies in its use in grammatical analysis rather than in connection with other communication skills. Little research, however, has been done on diagramming as a teaching device since the 1940's.

5. Of the states responding to the questionnaire, three-quarters have no materials available for teachers on diagramming. Nearly all (90.0%) of the cities offer no such material. Of twenty-eight total

respondents to this question (combining cities and states) 28.6% made available samples of the Reed and Kellogg diagram, 35.7% the tree (IC or transformational), and 21.5% the Chinese box, and 14.3% samples of the balloon diagram.

6. Two-thirds of the responding states and a majority of the responding cities desire that materials on diagrams be provided through a central agency. The majority of the states and cities that desire information from a central agent prefer the National Council of Teachers of English as a source, although some respondents prefer the United States Office of Education. To some it makes no difference which agency is used as a source.

Recommendations

In taking into consideration the preceding information concerning the current status of diagramming the writer sees the need for the following:

1. additional research in order to determine the specific function that diagrams serve in the field of English.

2. a concerted effort made by linguists, traditionalists and teachers at all levels in order to make diagramming a more meaningful device for English instruction.

3. explanatory materials on methods of diagramming and specific information on what English teachers need to know in order to use diagrams as an effective teaching device--all provided by a central agent (preferably the National Council of Teachers of English) to teachers on request.

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